

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

4201 East Arkansas Avenue
Denver, Colorado 80222
(303) 757-9011



June 23, 2000

Ms. Rhoda Owen Lewis, Regional Archaeologist
US Fish and Wildlife Service, Region 6
Denver Federal Center
P.O. Box 25486
Denver, CO 80225



Dear Ms. Lewis:

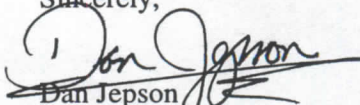
SUBJECT: Cultural Resources Survey Report for Colorado Department of Transportation Project
C R300-071, Region Wide Fencing

Enclosed for your files is a copy of the cultural resources survey report for the CDOT project referenced above. The undertaking involves the replacement of approximately 38 linear miles of right-of-way fencing along 12 highway segments in seven counties throughout northern and western Colorado. The report and all archival and field studies were completed by Centennial Archaeology, Inc., under contract to the State of Colorado. One corridor bisects lands administered by the US Fish and Wildlife Service (the Arapaho National Wildlife Refuge near State Highway 125 in Jackson County; Location 5 in the report); as I have recently detailed for you in a voicemail message, in order to streamline the administration of the project I will be handling the Section 106 coordination with the State Historic Preservation Officer and transmitting appropriate information to each involved federal agency (in addition to the the US Fish and Wildlife Service, fence replacement corridors cross Bureau of Land Management and US Forest Service properties).

The survey resulted in the recording of one prehistoric isolated find (5EA1689) and six historic sites (5GF2798.1, 5GF2799.1, 5PT889.1, 5PT890.1, 5RT1397.1, 5RT1396.1). In addition, four previously recorded prehistoric sites (5GA1275/5JA687, 5MF447-5MF449) and one previously recorded historic site (5GA686.14) were visited and reevaluated. Of these resources, only 5RT1396.1 and 5MF447 are considered significant or potentially significant. The former consists of a segment of the Denver and Rio Grande Western Railroad that is assessed as a contributing element of the larger National Register-eligible linear rail grade; it will not be adversely affected by the fencing operation. The latter site is an open prehistoric locality that has the potential for intact subsurface cultural remains. Site monitoring is recommended during fence installation, a task that will be undertaken by a CDOT archaeologist. None of the sites are located on US Fish and Wildlife lands.

The report has been submitted to the SHPO for review and compliance purposes, and I anticipate concurrence with our site significance and management recommendations by the middle of July. Please note that neither I nor the consultant initially realized that SH 125 crossed lands administered by your office, and you therefore were not notified of the project prior to the survey, as is appropriate. I hope that you will forgive this administrative oversight. If you have questions or require additional information about the project, please contact me in Denver at (303)757-9631.

Sincerely,


Dan Jepson
Staff Archaeologist

Enclosure

cc: RF/CF

**A CLASS III ARCHAEOLOGICAL SURVEY OF TWELVE REGION WIDE
FENCING UPGRADE LOCATIONS IN EAGLE, GRAND, GUNNISON, JACKSON,
MOFFAT, PITKIN, AND ROUTT COUNTIES, COLORADO**

by

Mary W. Painter

Submitted to

**Colorado Department of Transportation
Denver, Colorado**

by

**Centennial Archaeology, Inc.
Fort Collins, Colorado**

**Colorado Department of Transportation
Project No. C R300-071**

Principal Investigator: Christian J. Zier

**(All work performed under the terms of
State of Colorado Archaeological Permit No. 2000-21,
Bureau of Land Management Cultural Resources Use Permit No. C-47121,
and USDA-Forest Service Special Use Permit No. 88011)**

June 2000

ABSTRACT

The Colorado Department of Transportation proposes to upgrade existing right-of-way fencing along roadways at twelve separate locations in northwestern Colorado. To this end, a Class III cultural resource inventory was conducted by Centennial Archaeology, Inc. The project covered 37.8 linear miles of which 5.1 is federal land and 32.7 is state land. Total project survey acreage was 249 (200.13 state and 48.87 federal). The survey resulted in the recording of one prehistoric isolated find and six historic sites. In addition, four previously recorded prehistoric sites, and one previously recorded historic site were visited and reevaluated. Site 5EA1689 is an isolated find and does not require protection. Sites 5GF2798.1, 5GF2799.1, 5PT889.1, 5PT890.1, and 5RT1397.1 are segments of irrigation ditches that are assessed as not eligible to the National Register of Historic Places (NRHP). Site 5RT1396.1 is a segment of the Denver and Rio Grande Western Railroad that is assessed as a contributing element of the larger NRHP-eligible site. It will not be adversely impacted by fencing operations. The same is true for site 5GA686.14 - a contributing segment of the NRHP-eligible old US 40 (Victory Highway). Previously recorded prehistoric sites 5GA1275/5JA687, 5MF448, and 5MF449 have been destroyed and therefore will not be affected by construction. Previously recorded prehistoric site 5MF447 has the potential for subsurface cultural remains and therefore should be monitored by an archaeologist during fence construction. It is recommended that cultural resource clearance be granted so that CDOT Project No. C R300-071 can proceed, with the single stipulation that monitoring be conducted at 5MF447.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
ABSTRACT	ii
COLORADO OAHM MANAGEMENT INFORMATION FORM	iv
FIGURES	vi
TABLES	viii
INTRODUCTION	1
Background and Objectives	1
Administrative and Management Summary	17
ENVIRONMENTAL SETTING	17
EXISTING DATA AND LITERATURE REVIEW	18
Culture History	18
Paleoindian Era	19
Archaic Era	19
Formative Era	19
Protohistoric Era	20
Historic Occupation	20
File Search Data	21
RESEARCH ORIENTATION	25
ANTICIPATED RESULTS	25
FIELD METHODS	26
INVENTORY RESULTS AND EVALUATIONS	26
PROJECT SUMMARY AND MANAGEMENT RECOMMENDATIONS	31
REFERENCES CITED	34

Colorado Office of Archaeology and Historic Preservation
CULTURAL RESOURCE SURVEY MANAGEMENT INFORMATION FORM

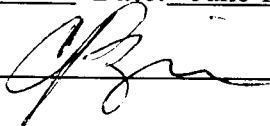
Please complete this form and attach a copy behind the Table of Contents of each standard survey report.

Federal acres of Potential Effect/Project: 48.87 Acres Surveyed: 48.87
 State acres of Potential Effect/Project: 200.13 Acres Surveyed: 200.13
 Private acres of Potential Effect/Project: _____ Acres Surveyed: _____
 TOTAL: 249 TOTAL: 249

Legal Location of Project (add additional pages if necessary) SEE CONTINUATION SHEET

Smithsonian Number (Sites)	Resource Type				Eligibility				Management Recommendations						
					Prehistoric	Historical	Paleontological	Unknown	Eligible	Not Eligible	Need Data	Contributes to NRHP District	No Further Work	Preserve/Avoid	Other (specify on additional pages) Monitor Test Excavate
SITES:															
5GF2798.1		X				X			X						
5GF2799.1		X				X			X						
5PT889.1		X				X			X						
5PT890.1		X				X			X						
5RT1396.1		X			X					X					Contributing segment to an NRHP-eligible site.
5RT1397.1		X				X			X						
ISOLATED FINDS:															
5EA1689	X					X			X						
TOTAL	1	6			1	6			6	1					

Principal Investigator: Christian J. Zier Date: June 19, 2000

Principal Investigator's Signature: 

Continuation Sheet

Legal Locations of Project by Colorado County

Eagle County:

T4S/R84W, Sections 26, 27, 33, 34.

T3S/R83W, Section 34.

T4S/R83W, Section 3, 22.

Garfield County:

T8S/R88W, Section 10.

Grand County:

TT5N/R82W, Sections 22, 23, 26, 34, 35.

Gunnison County:

T11S/R89W, Sections 1, 9.

Jackson County:

T5N/R82W, Sections 22, 23.

T7N/R79W, Sections 17, 20, 21.

Moffat County:

T5N/R91W, Sections 6, 7, 8, 17.

T6N/R91W, Sections 9, 10, 16, 20, 21, 29, 30, 31.

T7N/R90W, Sections 3, 10.

T8N/R90W, Sections 23, 26, 27, 34.

Pitkin County:

T8S/R88W, Section 15, 22, 27.

Routt County:

T3N/R85W, Sections 4, 5, 8, 9, 17.

FIGURES

<u>Figure</u>	<u>Page</u>
1 Project Locations	2
2 A portion of the 1962/1987 Eagle, CO USGS 7.5' quadrangle showing Location 1 project area in T4S/R84W, Sections 26, 27, 33, and 34, south side of SH 6	3
3-a A portion of the Round Bottom, CO. (1966) USGS 7.5' quadrangle showing part of Location 2 project area, west side of SH 13	4
3-b A portion of the Round Bottom, CO. (1966) USGS 7.5' quadrangle showing part of Location 2 project area, west side of SH 13	5
3-c A portion of the Castor Gulch, CO (1966) USGS 7.5' quadrangle showing part of the Location 2 project area, west side of SH 13	6
4 Portions of the McInturf Mesa, CO (1971/1973) and Ralph White Lake, CO (1971) USGS 7.5' quadrangles showing Location 3 project area, east side of SH 13	7
5 Portions of Lake Agnes, CO (1956) and Rabbit Ears Peak, CO (1956) USGS 7.5' quadrangles showing Location 4 project area in T5N/R82W, south side of US 40	8
6 A portion of the MacFarlane Reservoir (1955) USGS 7.5' quadrangle showing Location 5 in T7N/R79W, Sections 17, 20, 21, west side of SH 125	9
7 Portions of State Bridge, CO (1972/1987) and Wolcott, CO (1962/1987) USGS 7.5' quadrangles showing Location 6 project area in T3S/R83W and T4S/R83W, east side of SH 131	10
8 A portion of the State Bridge, CO (1972/1987) USGS 7.5' quadrangle showing Location 7 project area in T3S/R83W, west side of SH 131	11
9 Portions of the Oak Creek, CO. (1969) and Yampa, CO. (1972) USGS 7.5' quadrangles showing Location 8 project area in T3N/R85W, west side of SH 131	12
10 A portion of the Oak Creek, CO. (1969) USGS 7.5' quadrangle showing Location 25 project area in T3N/R85W, east side of SH 131)	13
11 Portions of the Chair Mountain, CO. (1963/1978) and Placita, CO. (1963/1978) USGS 7.5' quadrangles showing Location 10 project area in T11S/R89W, south side of SH 133	14

**FIGURES
(Continued)**

<u>Figure</u>	<u>Page</u>
12 Portions of the Carbondale (1961/1987) and Mount Sopris (1961/1987) USGS 7.5' quadrangles showing Location 11 and 12 project areas in T8S/R88W, north and south sides of SH 133	15

TABLES

<u>Table</u>	<u>Page</u>
1 State and Federal Lands in Project Area by Location and Highway	16
2 Previous Archaeological Surveys in the Present Project Area	22
3 Previously Recorded Sites that Fall within 500 Feet of the Present Project Area	23
4 Management Recommendations for Newly Recorded and Reevaluated Sites in the Present Project ROW by Location and Highway	32

INTRODUCTION

Background and Objectives

The Colorado Department of Transportation (CDOT) proposes to upgrade existing right-of-way (ROW) fencing along roadways at twelve separate locations in northwestern Colorado (Figure 1). This report details the results of intensive Class III archaeological investigations carried out at these locations by Centennial Archaeology, Inc. (Centennial) for CDOT Project No. C R300-071. The work was conducted in compliance with the National Historic Preservation Act of 1966 (as amended), Executive Order 11593 (1971), the Archaeological and Historic Preservation Act of 1974, and the Colorado Historical, Prehistorical, and Archaeological Resources Act of 1973 (as amended). The twelve locations are of varying lengths and parallel state highways (SH) in seven Colorado counties. Portions of some locations traverse Bureau of Land Management (BLM), USDA Forest Service, and other federal lands as noted below and presented in Table 1:

Location 1, SH 6 (Eagle County, Mile Post [MP] 150.2 to 152.7, south side): Located in T4S/R84W, where it traverses portions of Sections 26, 27, 33, and 34 (Eagle 7.5' quadrangle). The highway clips two corners of BLM-Glenwood Springs Field Office lands (federal) in Section 33 for an estimated linear distance of 0.3 mile of the 2.5-mile-long location (Figure 2).

Location 2, SH 13 (Moffat County, MP 77.4 to 87.4, west side): Located in T5N/R91W, Sections 6, 7, 8, 17 and T6N/R91W, Sections 9, 10, 16, 20, 21, 29, 30, 31 (Round Bottom and Castor Gulch 7.5' quadrangles). The location is 10.4 miles long (Figure 3). Note that an entirely new SH 13 roadway alignment now exists that does not appear on the present USGS maps, starting at approximately MP 80 in T5N/R91W, Section 6, and proceeding north to the end of Location 2.

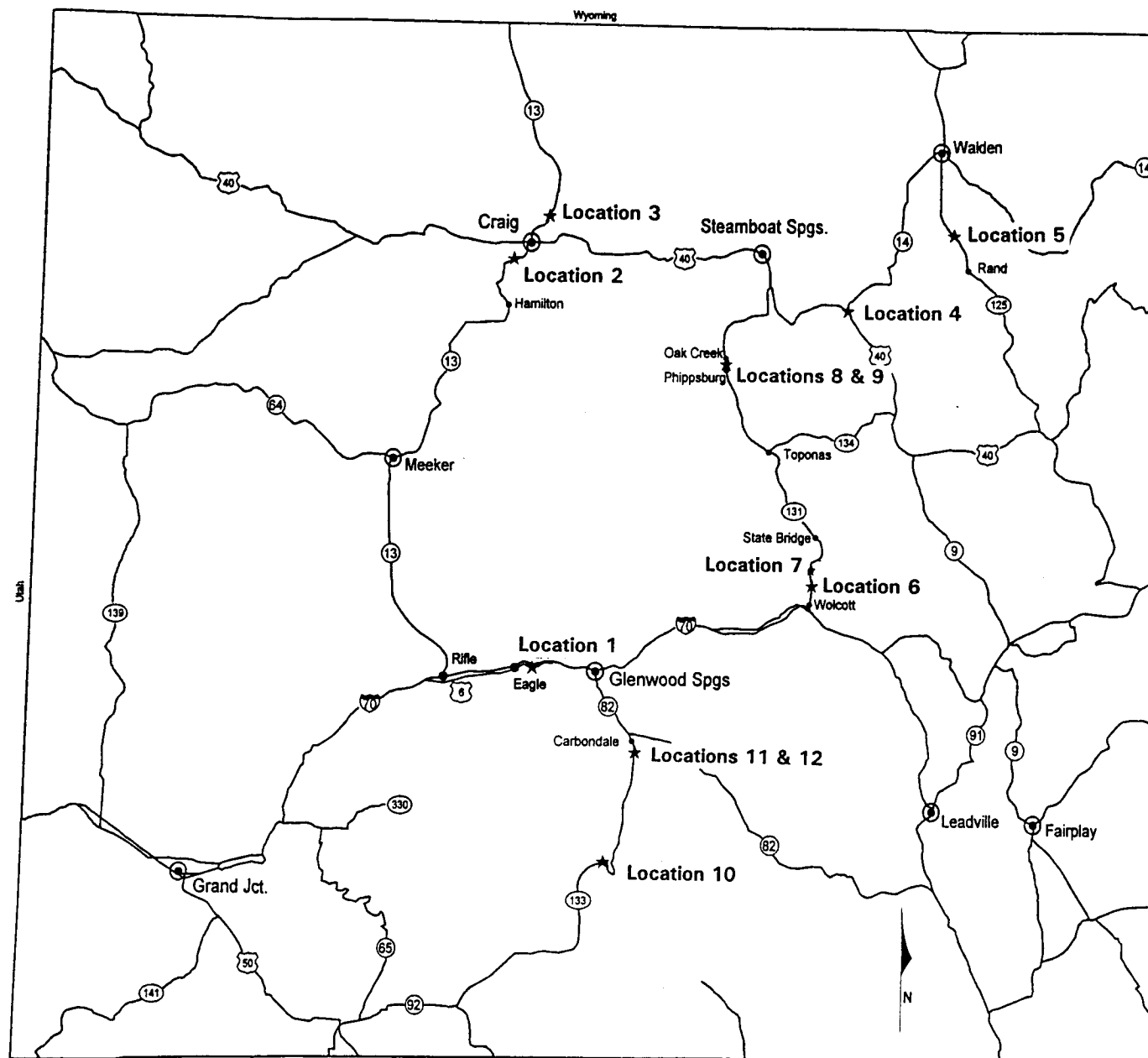
Location 3, SH 13 (Moffat County, MP 96.0 to 100.1, east side): Located in T7N/R90W, Sections 3, 10 and T8N/R90W, Sections 23, 26, 27, 34 (Ralph White Lake and McInturf Mesa 7.5' quadrangles). The linear distance is 4.1 miles (Figure 4).

Location 4, US 40 (Jackson and Grand Counties, MP 157.3 to 160.0, south side): Located in T5N/R82W, Sections 26, 34, 35 (Lake Agnes and Rabbit Ears Peak 7.5' quadrangles). The location covers 2.7 linear miles (Figure 5).

Location 5, SH 125 (Jackson County, MP 39.8 to 41.9, west side): Located in T7N/R79W, Sections 17, 20, 21 (MacFarlane Reservoir 7.5' quadrangle). The location is 2.1 miles long of which 0.7 miles traverses the Arapaho National Wildlife Refuge (federal) that is administered by the U.S. Fish and Wildlife Service (Figure 6).

Location 6, SH 131 (Eagle County, MP 2.9 to 4.1, east side): Located in T3S/R83W, Section 34 and T4S/R83W, Section 3 (Wolcott and State Bridge 7.5' quadrangles). The location is 1.2 miles long of which 0.3 mile traverses BLM-Glenwood Springs Field Office federal lands (Figure 7).

Figure 1
Project Locations



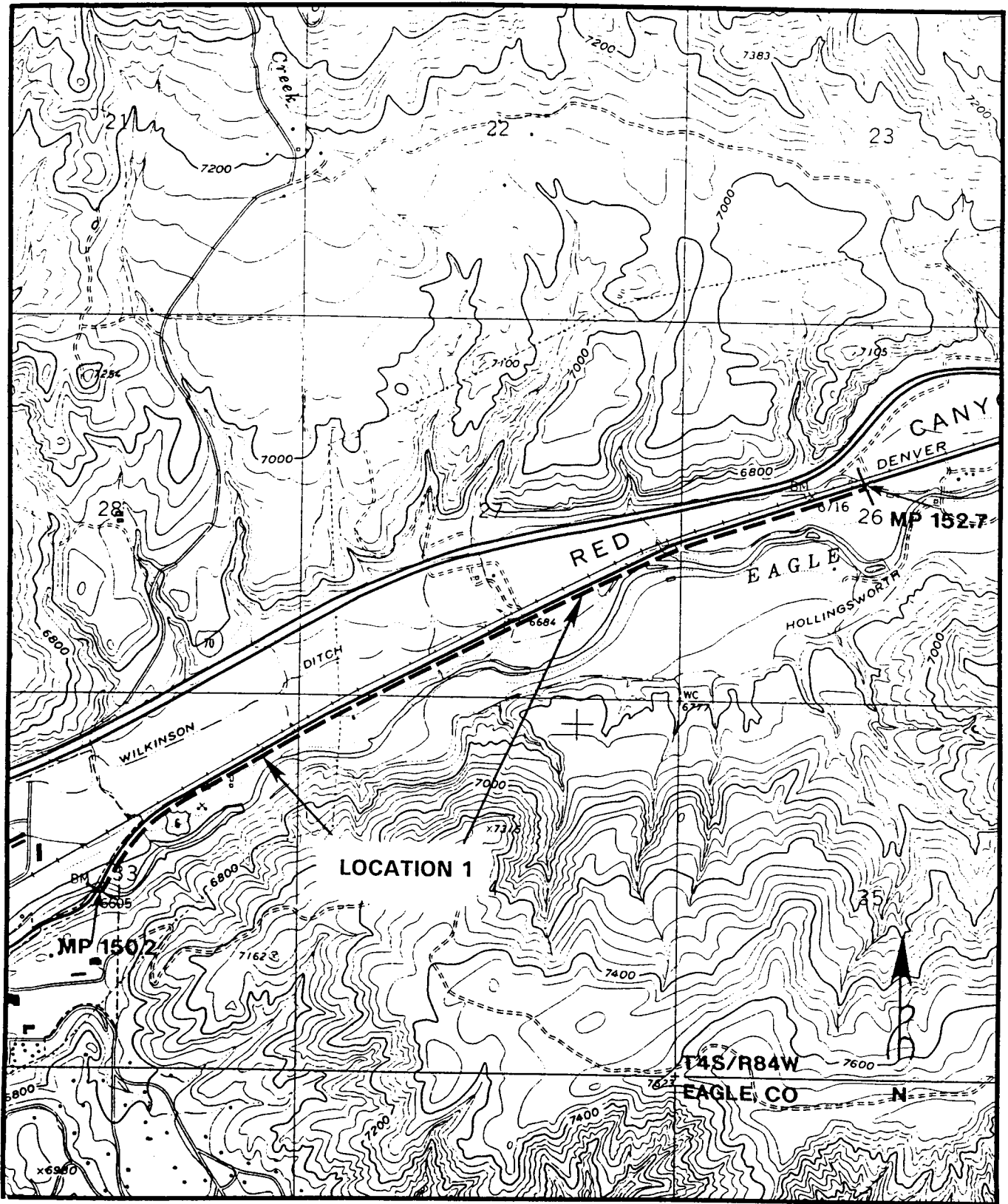


Figure 2: A portion of the 1962/1987 Eagle, CO USGS 7.5' quadrangle showing Location 1 project area in T4S/R84W, Sections 26, 27, 33, and 34, south side of SH 6.

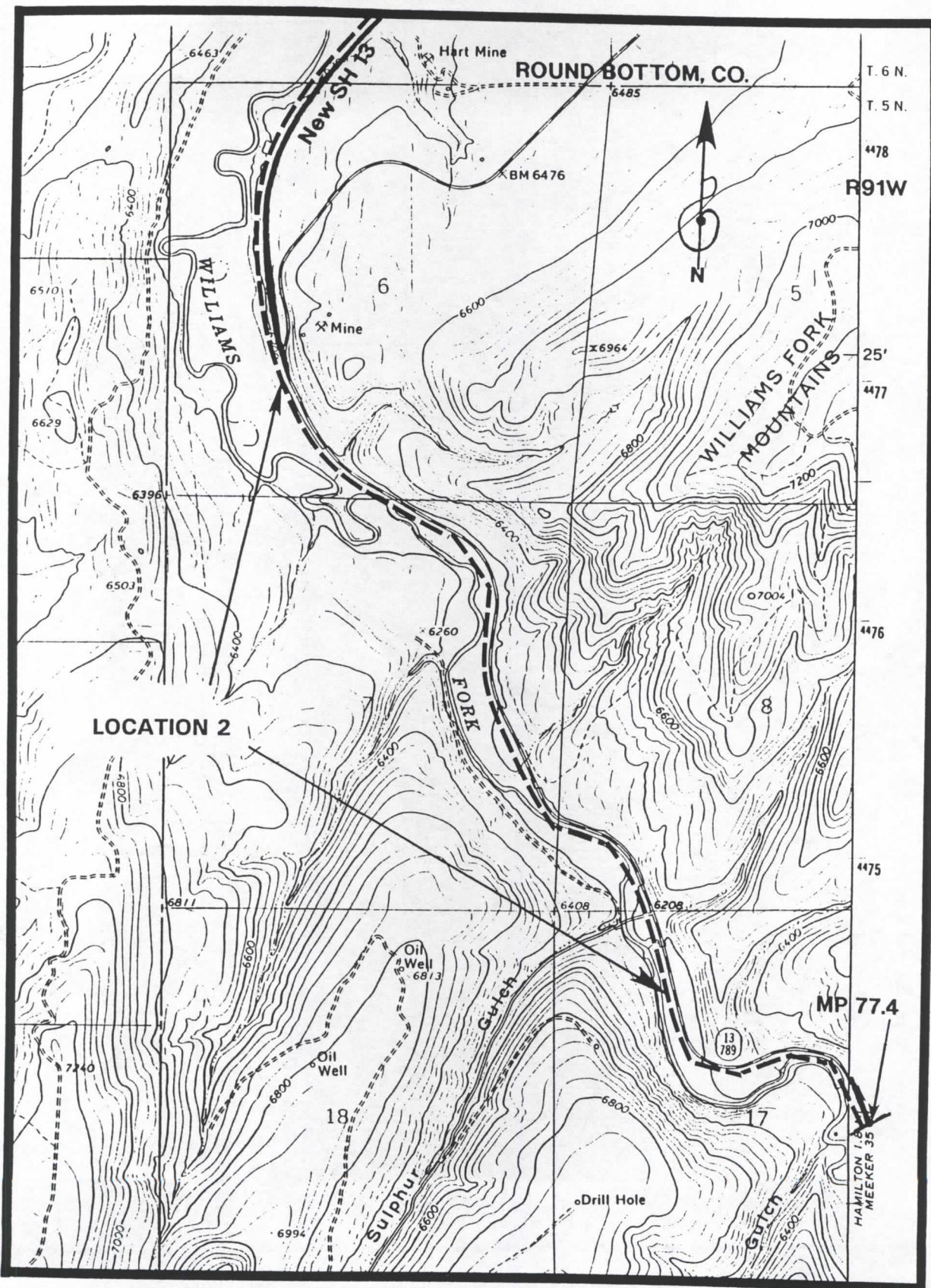


Figure 3-a: A portion of the Round Bottom, CO. (1966) USGS 7.5' quadrangle showing part of Location 2 project area, west side of SH 13.

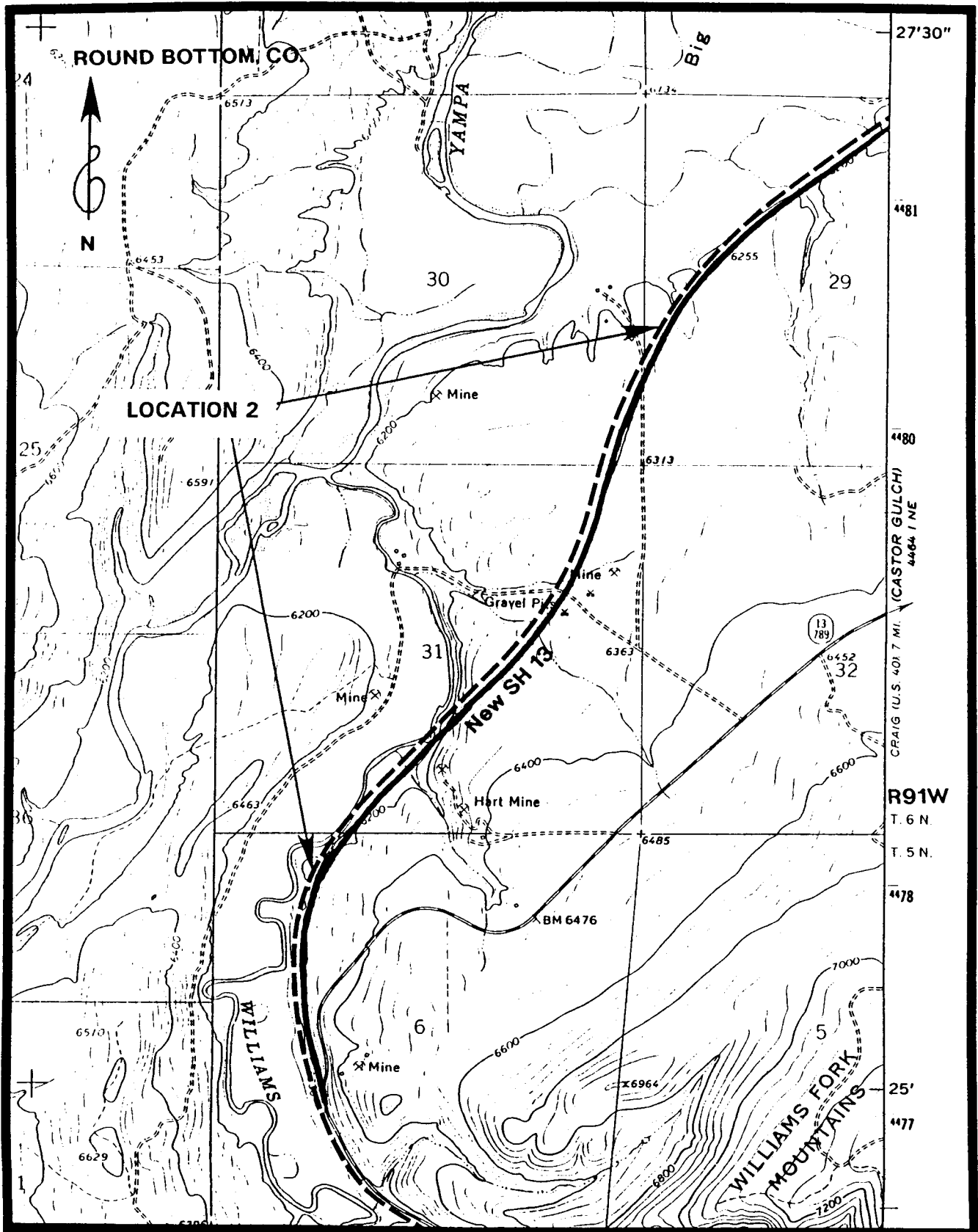


Figure 3-b: A portion of the Round Bottom, CO. (1966) USGS 7.5' quadrangle showing part of Location 2 project area, west side of SH 13.

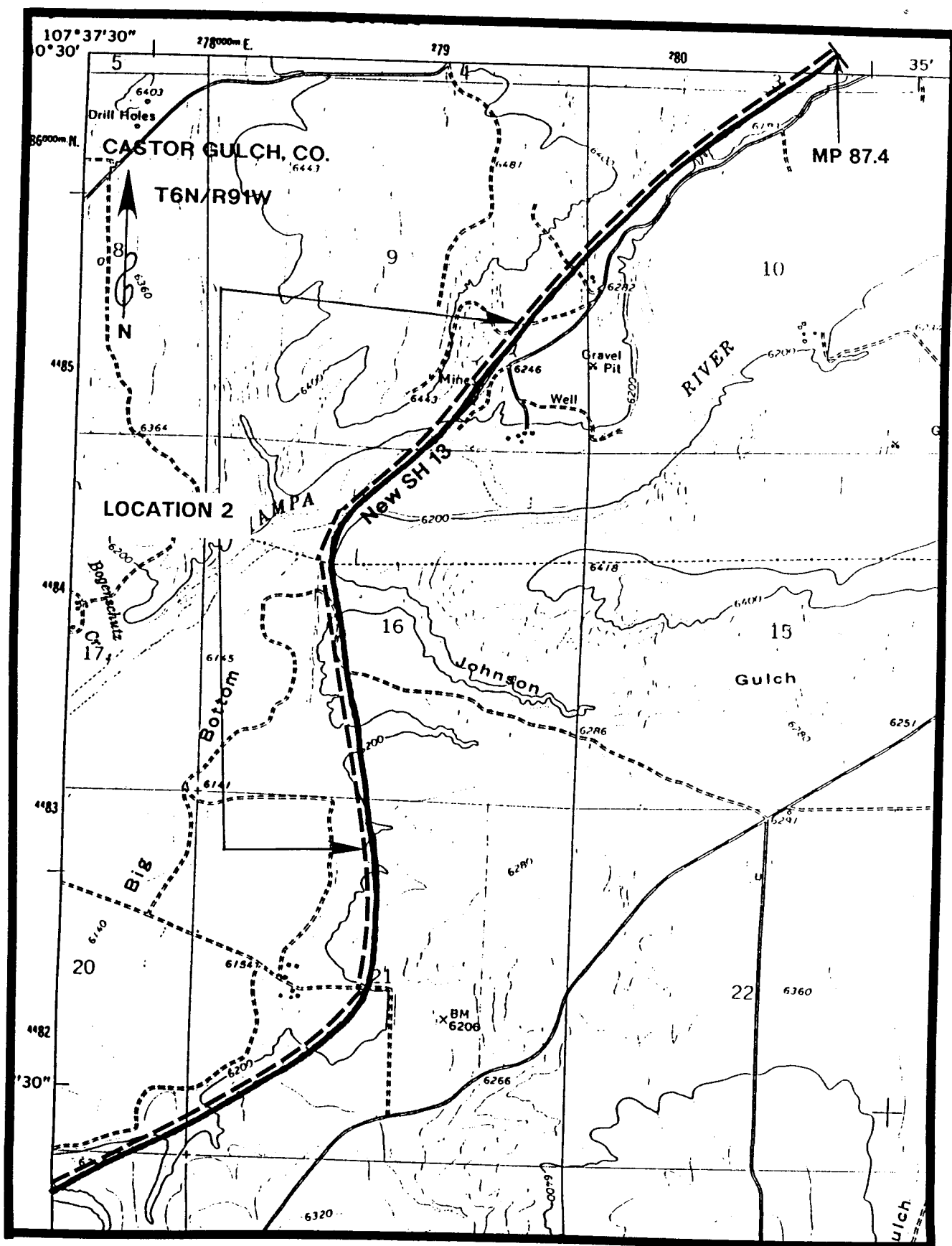


Figure 3-c: A portion of the Castor Gulch, CO (1966) USGS 7.5' quadrangle showing part of the Location 2 project area, west side of SH 13.

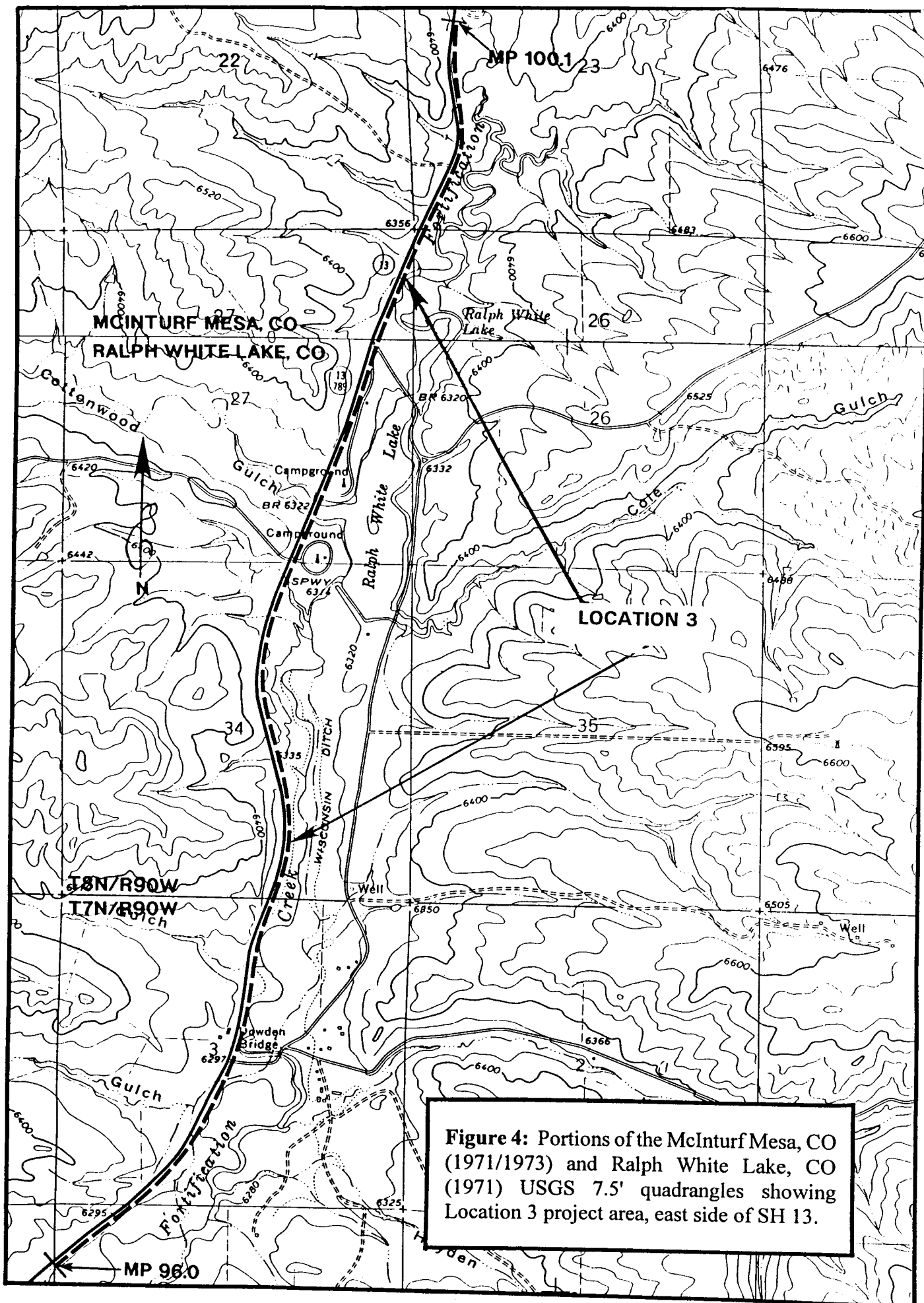


Figure 4: Portions of the McInturf Mesa, CO (1971/1973) and Ralph White Lake, CO (1971) USGS 7.5' quadrangles showing Location 3 project area, east side of SH 13.

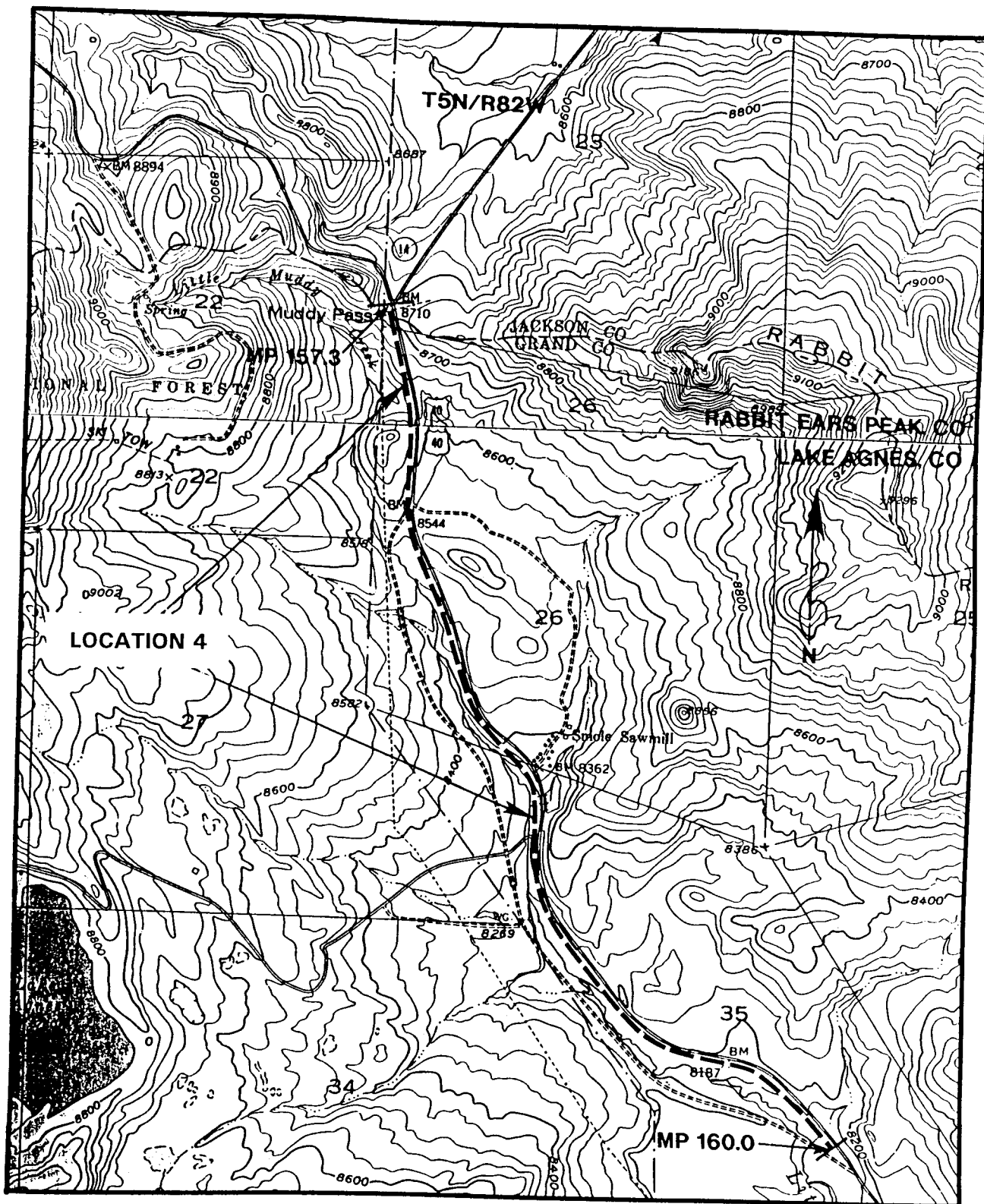


Figure 5: Portions of Lake Agnes, CO (1956) and Rabbit Ears Peak, CO (1956) USGS 7.5' quadrangles showing Location 4 project area in T5N/R82W, south side of US 40.

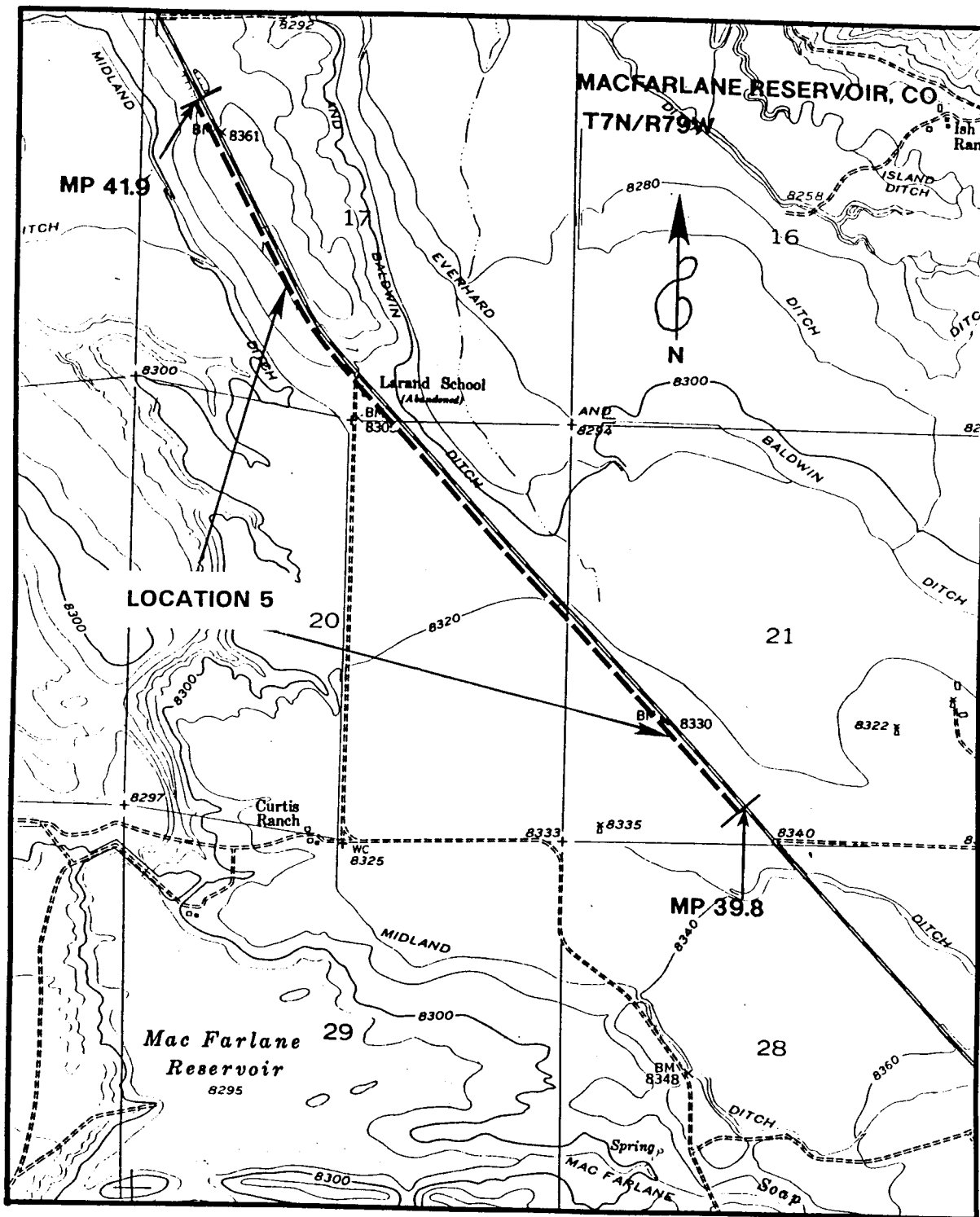


Figure 6: A portion of the MacFarlane Reservoir (1955) USGS 7.5' quadrangle showing Location 5 in T7N/R79W, Sections 17, 20, 21, west side of SH 125.

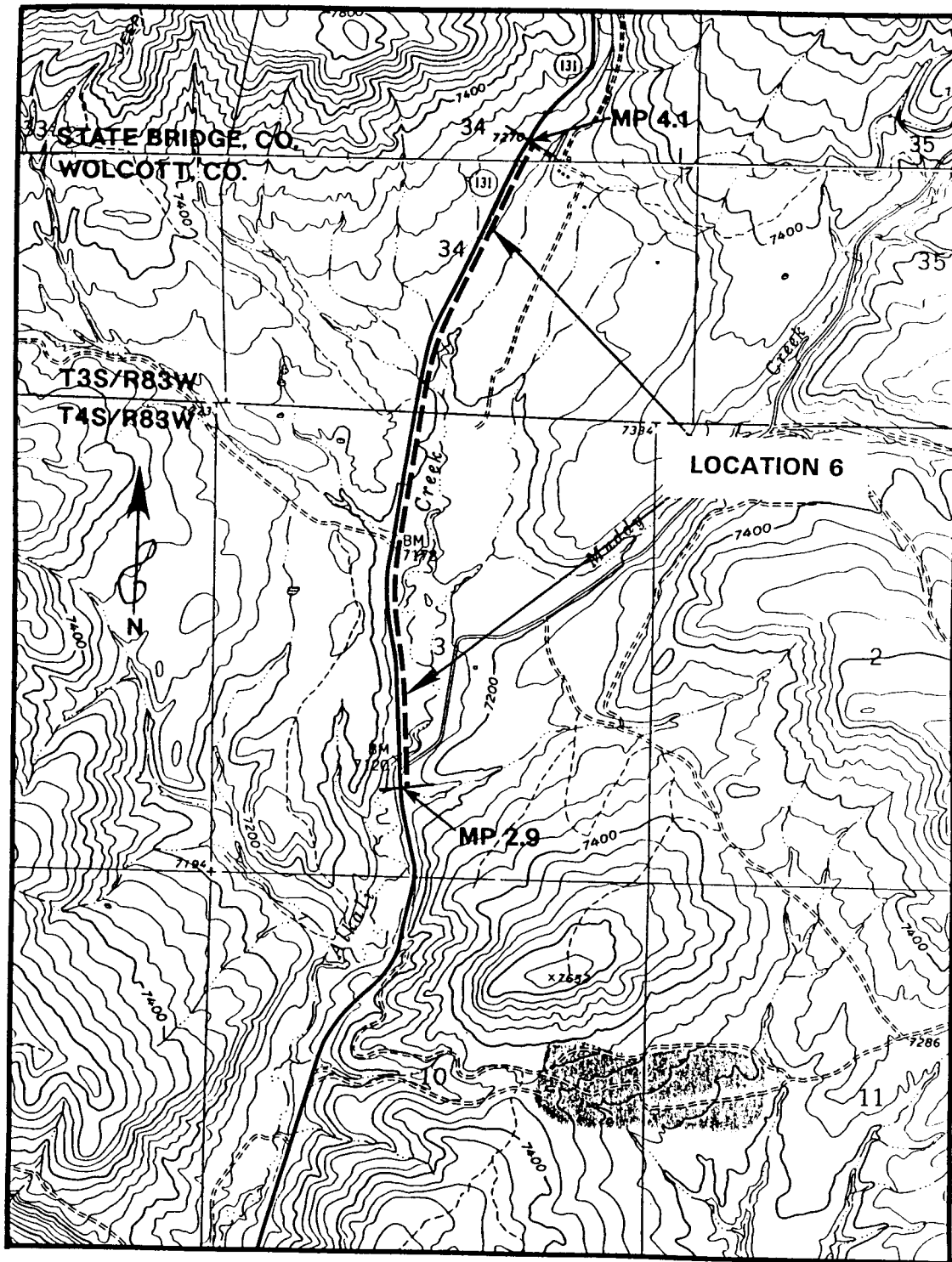


Figure 7: Portions of State Bridge, CO (1972/1987) and Wolcott, CO (1962/1987) USGS 7.5' quadrangles showing Location 6 project area in T3S/R83W and T4S/R83W, east side of SH 131.

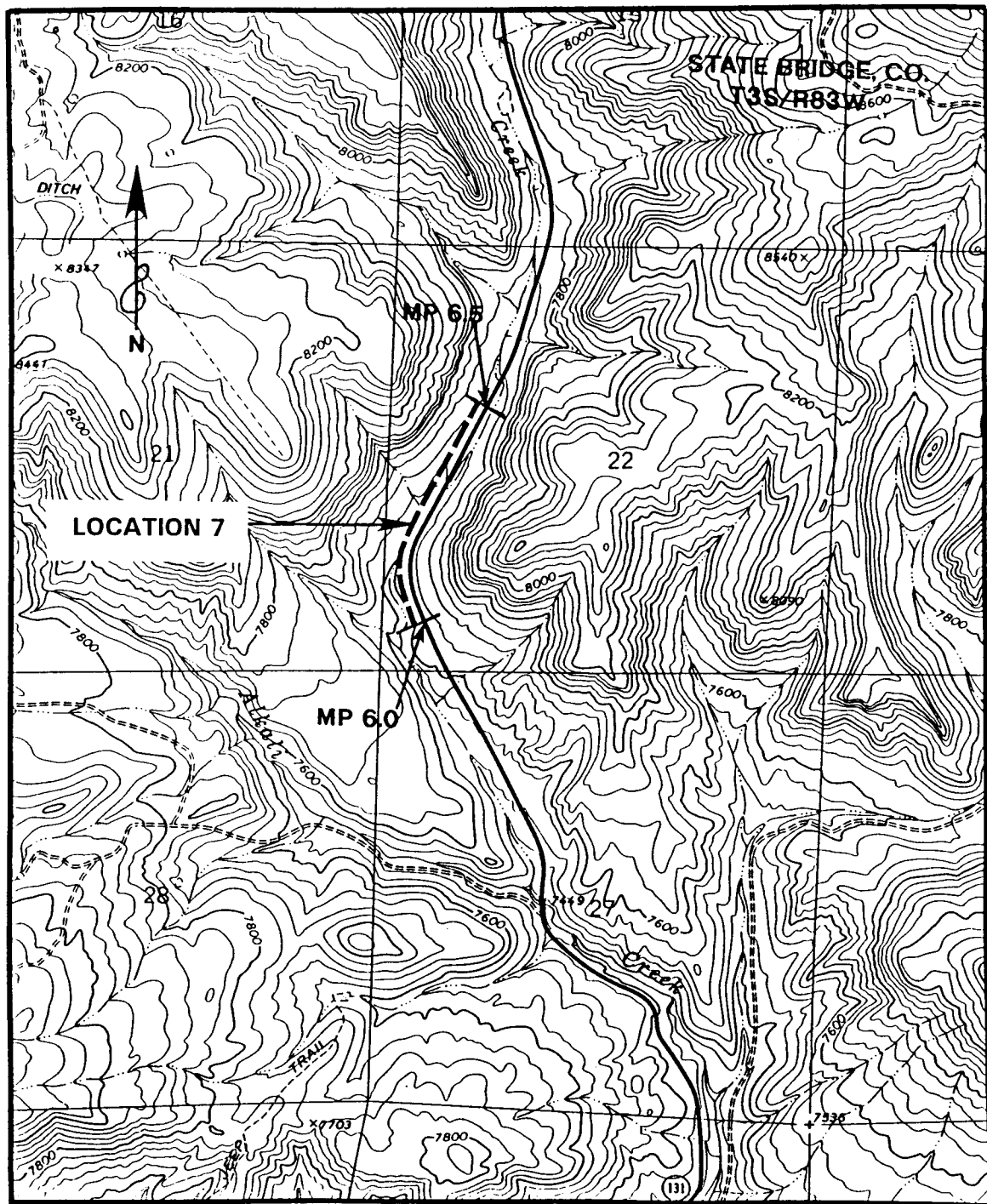


Figure 8: A portion of the State Bridge, CO (1972/1987) USGS 7.5' quadrangle showing Location 7 project area in T3S/R83W, west side of SH 131.

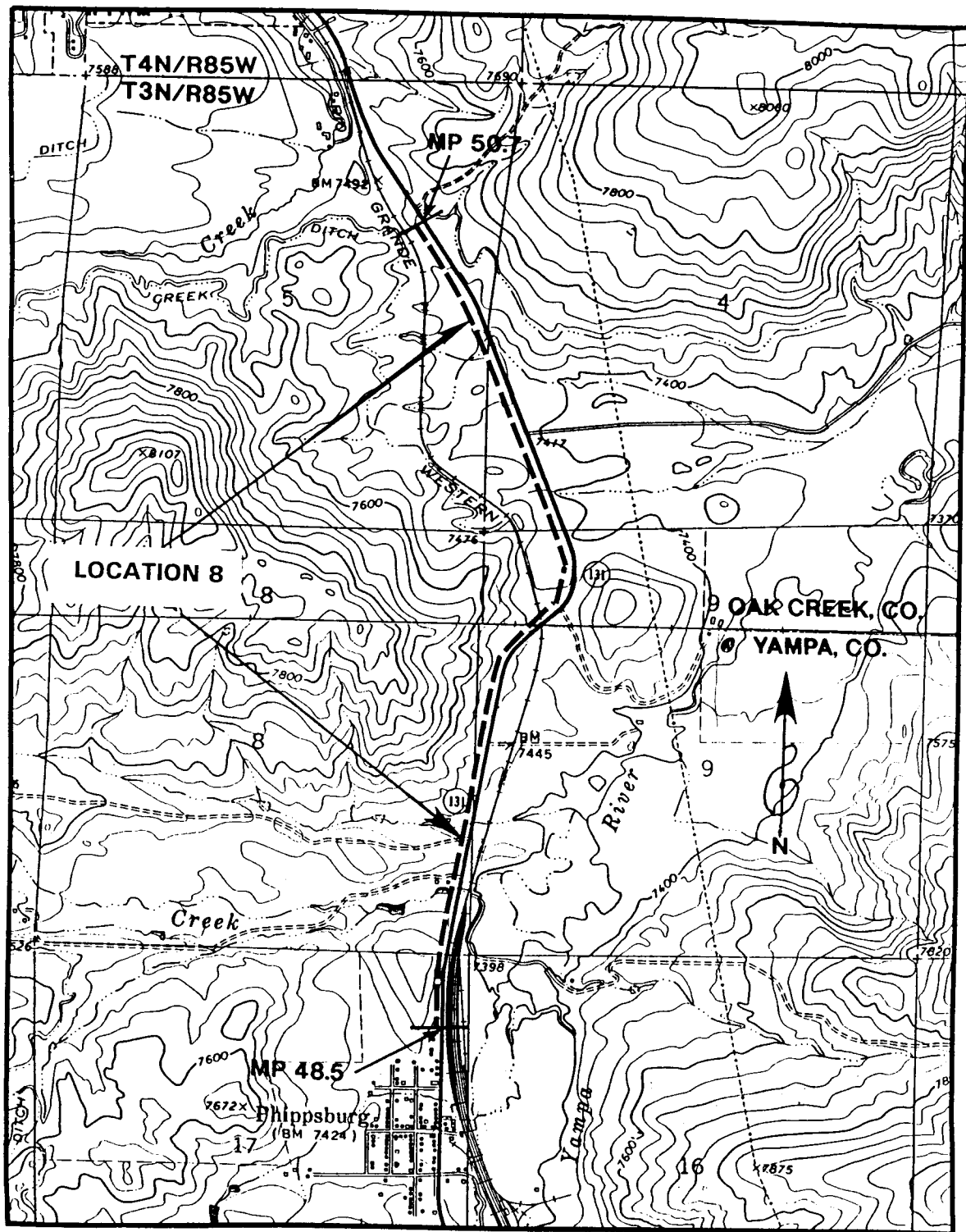


Figure 9: Portions of the Oak Creek, CO. (1969) and Yampa, CO. (1972) USGS 7.5' quadrangles showing Location 8 project area in T3N/R85W, west side of SH 131.

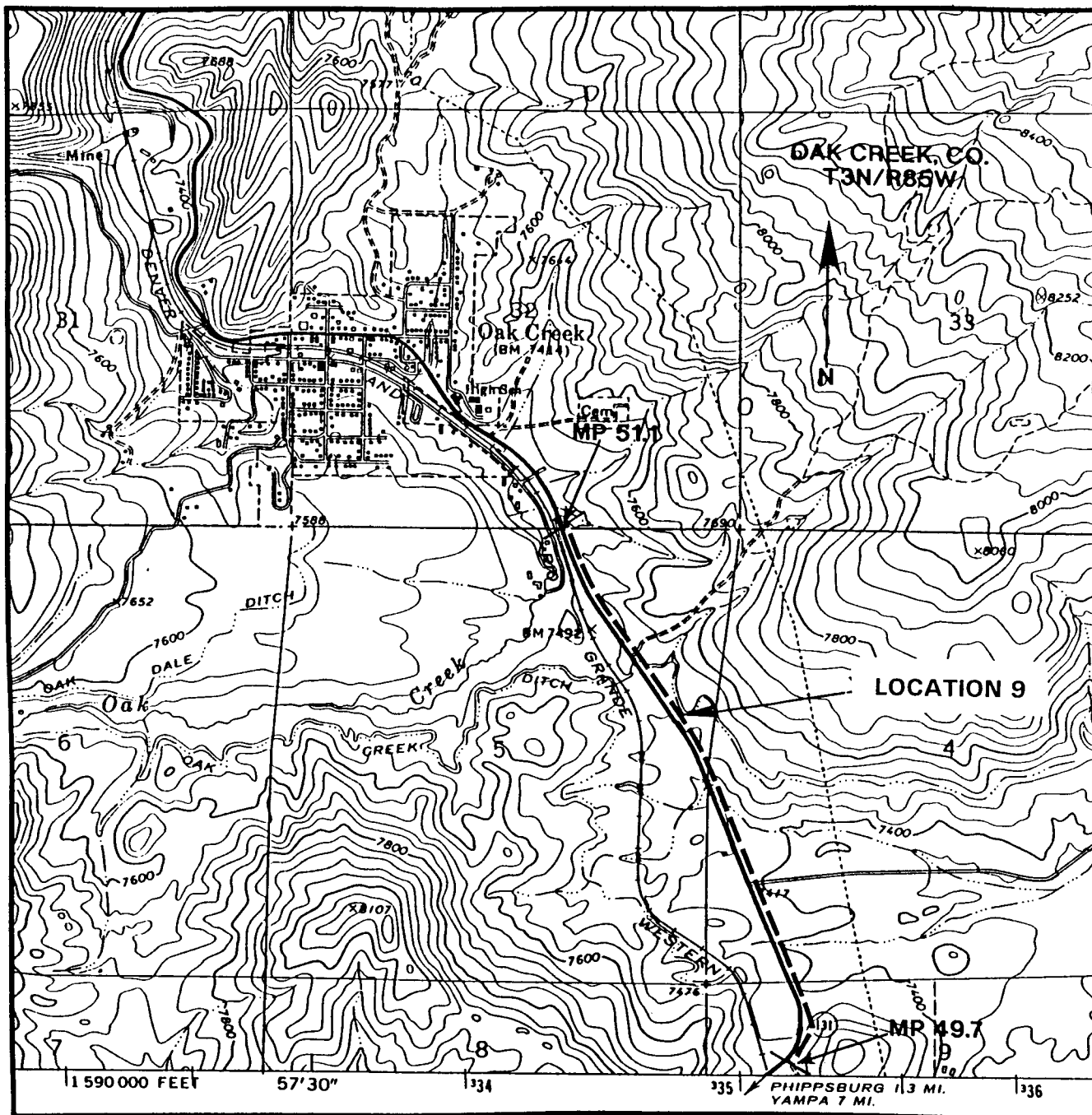


Figure 10: A portion of the Oak Creek, CO. (1969) USGS 7.5' quadrangle showing Location 9 project area in T3N/R85W, east side of SH 131).

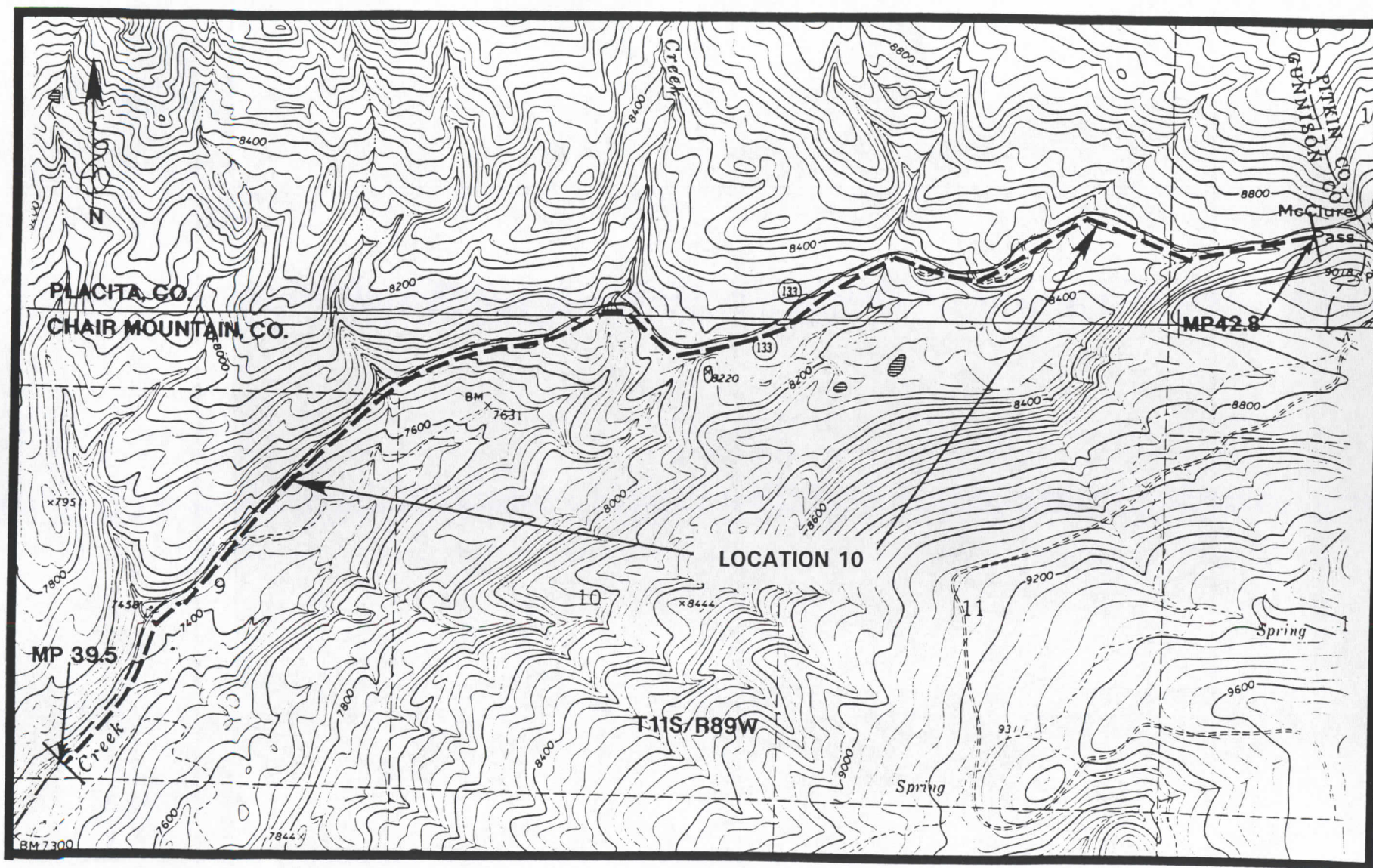


Figure 11: Portions of the Chair Mountain, CO. (1963/1978) and Placita, CO. (1963/1978) USGS 7.5' quadrangles showing Location 10 project area in T11S/R89W, south side of SH 133.

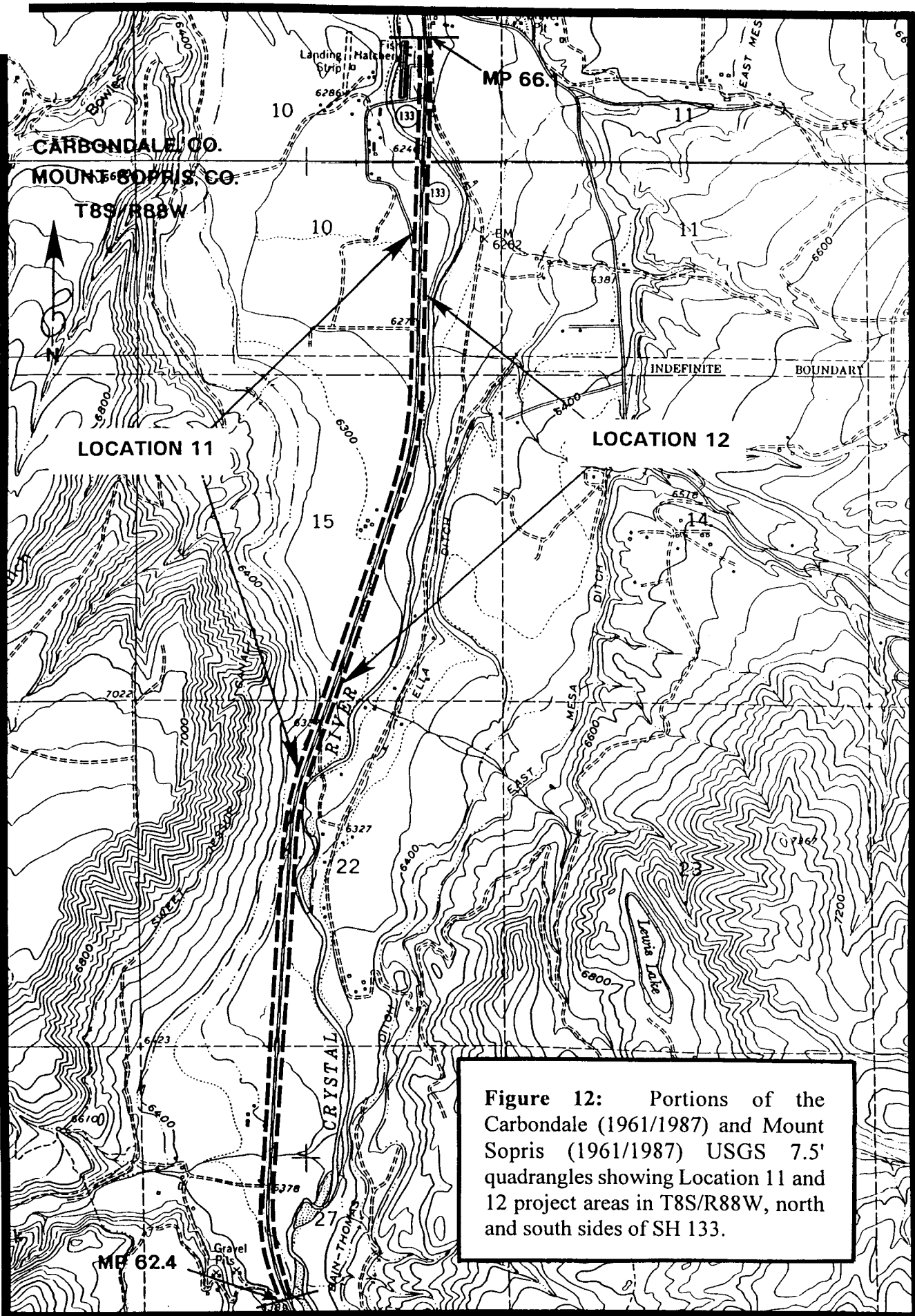


Figure 12: Portions of the Carbondale (1961/1987) and Mount Sopris (1961/1987) USGS 7.5' quadrangles showing Location 11 and 12 project areas in T8S/R88W, north and south sides of SH 133.

Table 1: State and Federal Lands in Project Area by Location and Highway

Location Number	State/US Highway	Mile Post to Mile Post	Side of Highway	Linear Miles of State Land	Linear Miles of Federal Land	Total
1	6	150.2 - 152.7	south	2.2	0.3	2.5
2	13	77.4 - 87.4	west	7.7	0	10.4
3	13	96.0 - 100.1	east	1.8	0	4.1
4	US 40	157.3 - 160.0	south	2.7	0	2.7
5	125	39.8 - 41.9	west	1.4	0.7	2.1
6	131	2.9 - 4.1	east	0.9	0.3	1.2
7	131	6.0 - 6.5	west	0	0.5	0.5
8	131	48.5 - 50.7	west	2.2	0	2.2
9	131	49.7 - 51.1	east	1.4	0	1.4
10	133	39.5 - 42.8	south	0	3.3	3.3
11	133	62.4 - 66.1	north	3.7	0	3.7
12	133	62.4 - 66.1	south	3.7	0	3.7
Subtotal:				32.7	5.1	↓
Grand Total:						37.8

Location 7, SH 131 (Eagle County, MP 6.0 to 6.5, west side): This 0.5 mile road segment is located in T3S/R83W, Section 22 (State Bridge 7.5' quadrangle). The entire segment traverses BLM-Glenwood Springs Field Office federal lands (Figure 8).

Location 8, SH 131 (Routt County, MP 48.5 to 50.7, west side): This 2.2 mile-long segment is located in T3N/R85W, Sections 4, 5, 8, 9, 17 (Oak Creek and Yampa 7.5' quadrangles) (Figure 9).

Location 9, SH 131 (Routt County, MP 49.7 to 51.1, east side): This is a 1.4 mile-long road segment located in T3N/R85W, Sections 4, 5, 9 (Oak Creek 7.5' quadrangle) (Figure 10).

Location 10, SH 133 (Gunnison County, MP 39.5 to 42.8, south side): Located in T11S/R89W, Sections 1, 9, and unplatted land (Chair Mountain and Placita 7.5' quadrangles). The entire 3.3 mile-long segment runs through federal lands of the Gunnison National Forest (Figure 11).

Locations 11 and 12, SH 133 (Garfield and Pitkin Counties, MP 62.4 to 66.1, north and south sides): This location encompasses both sides of a 3.7 mile-long road segment (for a total of 7.4 linear miles surveyed) located in T8S/R88W, Sections 10, 15, 22, 27 (Carbondale and Mount Sopris 7.5' quadrangles) (Figure 12).

Any linear distance inaccuracies noted on the project location maps can be attributed to understandable variations in the placement of mile post markers in the field combined with the practicality of measuring tenths of miles with an automobile odometer. Identification of beginning and end points for the twelve locations was achieved using data provided on relevant USGS 7.5' quadrangles in combination with observations made in the field and reference to the CDOT Field Log of Structures (Bridge Management System Unit 1999).

The objectives of the inventory were to locate and record all cultural resources in the project area, to evaluate such resources under the eligibility criteria for the National Register of Historic Places, and to formulate management recommendations for significant resources. When encountered, cultural resource sites were evaluated under the guidelines provided in 36 CFR 60 and in accordance with themes developed by the Colorado Office of Archaeology and Historic Preservation (OAHP) for the Northern Colorado River Basin prehistoric context (Reed and Metcalf 1999) and the Colorado Mountains historic context (Mehls 1984).

Administrative and Management Summary

Mary W. Painter was project supervisor; she was assisted in the field by crew chief Michael A. Baumann and crew members Cody M. Anderson and Jean M. Conlan. Christian J. Zier acted as Principal Investigator. Fieldwork was conducted on May 3 and 4, 2000, under the terms of State of Colorado Archaeological Permit No. 2000-21, Bureau of Land Management Cultural Resource Use Permit No. C-47121, and USDA-Forest Service Special Use Permit No. 88011. A total of 37.8 linear miles of highway ROW was surveyed of which 32.7 miles is state land and 5.1 miles is federal land. The distance between the road pavement edge and ROW fence was highly variable. However, the average distance was estimated to be 50 ft, except at Location 10 where the average was 100 ft. The total project survey acreage was 249 (200.13 state and 48.87 federal). No artifacts were collected. All project records are filed permanently in the office of Centennial Archaeology, Inc., Fort Collins, Colorado.

ENVIRONMENTAL SETTING

Because the twelve scattered survey locations were selected by CDOT on the basis of fence ROW maintenance needs in the wide geographic area of northwestern Colorado and not on the basis of physiography, presentation of a single unifying environmental description is difficult. The discontinuous boundaries of the project area lie predominantly within the Southern Rockies physiographic province of the Colorado Rocky Mountain region (Madole *et al.* 1987:211; Benedict

1991:3). All locations save Location 5 are west of the Continental Divide and range in altitude from 6320 ft at Locations 11 and 12 in Pitkin and Garfield Counties to 8700' at Location 48 in Grand and Jackson Counties. The regional ecology may be broadly described as mixed Douglas-fir/ponderosa pine woodlands in association with shrubs and grasses (Benedict 1991). Soils are varied but are generally shallow and poorly developed, and commonly contain large amounts of sand, pebbles, and rocks produced through the mass wasting processes of the Rocky Mountains.

Benedict (1991:125-148) reports that climatic conditions in the study area are dictated by the mid-continent/middle latitude location of the Southern Rockies. Eastward-moving storms that originate over the Pacific Ocean lose most of their moisture passing over mountain ranges west of the Southern Rockies, thus further intensifying the continental effects. Seasonal differences in the angle of the sun above the horizon and in day length account for substantial temperature variations from summer to winter. High altitude air is less heavy and dense than at sea level and as a result has a reduced capacity to retain heat, thus resulting in significant temperature changes from day to night that can be particularly sharp when the day has been bright and sunny. Temperature inversions that result in cold air pooling (in basin valleys) or cold air drainage (in open valleys) are common in the mountains. In the North Park area near Locations 4 and 5, diurnal temperatures are commonly known to fluctuate as much as 50°F (Benedict 1991:134).

Natural water sources in the project area vary in size and carrying capacity and the amount of water carried can fluctuate dramatically depending on the season of the year. The volume of water released from snow pack in the early spring depends not only on the amount of snow laid down during the previous winter, but on a dramatic rise in temperature that triggers and sustains spring runoff. Intense and often violent rain storms occur in late spring and summer throughout the Southern Rocky Mountain region and commonly produce large volumes of water in a remarkably short period of time.

Wildlife in the region includes a number of large game animals such as elk, mule deer, pronghorn antelope, moose, and bighorn sheep. Other wildlife found in abundance are beaver, muskrat, mink, martin, coyote, fox, and skunk. Bobcat and wolverine are also known to occur. Bison and wolves were originally indigenous to the area but have been extirpated from the region in modern times. Commonly occurring avian species include Canada goose, sharp-tailed and sage grouse, mountain bluebird, sandhill crane and several raptor species (Fitzgerald et al. 1994; Mutel and Emerick 1992).

EXISTING DATA AND LITERATURE REVIEW

Culture History

The twelve separate locations that comprise the study area are spread over a wide geographic area in northwestern Colorado that includes part of the Colorado Rocky Mountains and extends westward to the edge of the Colorado Plateau. Existing data suggest that the prehistory of the area

is not unique; events here were very much a part of - and therefore also reflect - broad patterns of adaptation and change in the greater Northwestern Plains/Wyoming Basin, Middle/Southern Rocky Mountains and Great Basin areas. The following culture history follows the basic framework of the recently published prehistoric context for the upper Colorado River Basin (Reed and Metcalf 1999). It includes modified text from a previous cultural resource inventory by Centennial conducted west of Steamboat Springs that is of similar scale to the present undertaking and which continues a chronology for the historic period (Arbogast 1992).

Paleoindian Era (13,400 - 7500 B.P.)

The Paleoindian occupants of the Colorado Mountain valleys are thought to have been oriented toward a more balanced hunting-gathering mode than were contemporaneous manifestations of big-game hunting on the Plains. The Llano period or Clovis tradition (13,400 -12,500 B.P.) is associated with the Clovis point and *Mammuthus* sp., and the succeeding Folsom tradition (12,800 -11,500 B.P.) with Folsom points in association with *Bison antiquus*. No excavated components and only a few surface finds of Clovis and Folsom points have been recorded in the general vicinity.

The Plano tradition (11,500 - 7500 B.P.) of the Paleoindian stage is better represented in the general project area. The Plano tradition appears to be divided into two culture groups; one that continued to focus on classic bison hunting on open plains, and a second Foothill-Mountain complex that occupied higher elevations at the edge of the plains and hunted deer, bighorn sheep, and pronghorn. It is more likely that the latter group occupied the present study area (Reed and Metcalf 1999:57).

Archaic Era (8500 - 1700 B.P.)

An even more generalized adaptive strategy appears to have developed with the advent of essentially modern Holocene climatic conditions during the Archaic stage. Definition of chronological periods within the Archaic stage is based more on technological distinctions than on any observable adaptive differences. The Early Archaic period (8500 - 5000 B.P.) is identified on the basis of large- and medium-sized, side-notched projectile points and Pinto Series points, the Middle Archaic period (5000 - 3000 B.P.) by McKean Complex points and possibly Humboldt and Elko Series points, and the Late Archaic period (3000 - 1700 B.P.) by a wide variety of stemmed, corner-notched dart points. Each of the Archaic periods is well represented by both excavated and surface components in the Yampa and other northwestern Colorado valleys (Kalasz et al. 1990).

Formative Era (2400 - 700 B.P.)

The Formative era is an extended period of time when corn was the major subsistence focus in portions of western Colorado, including western Moffat and Rio Blanco counties west of the present study area. However, both horticultural and nonhorticultural groups occupied the area. Horticulturalists included Anasazi and Fremont groups. The former are identified by substantial habitation structures and distinctive pottery and rock art. The Fremont were a considerably more

variable group with regional variants such as the Uinta, San Rafael, Great Salt Lake, Sevier and Parowan Fremont. The Fremont relied on horticulture to varying degrees and shared other attributes such as a distinct coiled pottery tradition and artistic expression in the form of clay figurines and trapezoidal anthropomorphic rock art designs.

Nonhorticulturalists inhabited higher elevations such as the present project area where plant cultivation was less reliable and hunting/gathering was the more amenable subsistence strategy. In this area the transition from the Archaic included, among other things, a shift to the bow and arrow and a gradual broadening of hunting/gathering subsistence to include the use of prepared firepits for food processing. Reed and Metcalf (1999) propose the name Aspen tradition for these nonhorticulturalists. The authors identify a number of Aspen tradition sites throughout the current study area in western Moffat County, central Routt County, central Garfield County, western Eagle County and western Grand County.

Protohistoric Era (700 - 119 B.P.)

The onset of the Protohistoric era is based on the estimated date of the acquisition of the horse and the adoption of an equestrian lifestyle by resident Ute in northwestern Colorado up to their expulsion to reservations in 1881 A.D. The era is identified by Euroamerican material goods, metal objects, Shoshonean ceramics, Ute-style rock art, and stick, brush and bark structures. Despite a dearth of excavated components, archaeological evidence of probable Protohistoric age is not uncommon in and around northwestern Colorado and includes structural remnants (e.g., wickiups), ceramics, and occasional metal projectile points (Kalasz et al. 1990:30 after La Point 1987:211-213).

Historic Occupation

Mehls (1984) discusses the general historic context of the Colorado mountains including the project area. The following summary relates to the immediate project area and is based on Tread of the Pioneers Museum (1979).

French and British fur traders may have been in the area as early as the late 18th century. The first recorded American entry to the area occurred in the late 1830s. A fur-trading post, Fort Davy Crockett, was established in 1836 at Browns Hole and was abandoned in 1841. In 1866, Hahns Peak, north of Steamboat Springs, was settled by gold prospectors, and the first settlement in what is now Steamboat Springs occurred in 1875.

Cattle ranching was the main industry of the area from 1880 to 1920. The arrival of the "Moffat Road" railroad (originally the Denver, Northwestern and Pacific, and later the Denver, Salt Lake and Pacific) in 1908 made it economically feasible to exploit the coal resources of northwestern Colorado. The period from 1920 to the late 1940s witnessed the peak of coal mining in the area. By 1950 the mines had become unprofitable and many closed; the last of the large underground mines, at Mount Harris, closed in 1958. The town of Milner was established in 1898 east of Craig and served as supply headquarters for many of the surrounding coal mines.

U.S. Highway 40 (Location 8 survey area) was originally constructed with private funds as a memorial to fallen veterans of World War I. Called the Victory Highway, it provided the first transcontinental link between New York and San Francisco. The portion between Steamboat Springs and Craig was completed in 1923. In the early 1930s the federal government reconstructed the road over Rabbit Ears Pass, and in 1935 it was designated U.S. 40.

File Search Data

Prior to Class III field investigations, a Class I file search was conducted to determine the location of all previous surveys and all sites known to occur within the present study area. This included investigations at the Colorado Historical Society/Office of Archaeology and Historic Preservation (OAHP) and the in-house files of CDOT. Results of the OAHP search were generated on April 19, 2000, and CDOT provided their search results to Centennial at the onset of the project. Table 2 presents all previous surveys that bisect or encompass any part of the present project area. Table 3 presents all previously recorded sites located within 500 ft of the present project ROW.

A quick perusal of Table 2 shows clearly that, except for Location 2, a negligible portion of the present project area has been previously surveyed. Any attempt to identify these points in the field with the intent of avoiding them would probably have consumed more time than it would have taken to simply resurvey the ground.

Table 3 reveals that nineteen previously recorded sites occur within 500 ft of the project area, of which thirteen are outside the project ROW, three are in the ROW but have been destroyed or are buried under the paved roadway, and three are fully, or at least partially, in the ROW. Of the latter, site 5GA1275/5JA687 appears to be destroyed within the ROW and thus will not be adversely impacted by fencing operations. Site 5GA686.14 is a contributing segment of the NRHP-eligible old US 40 (Victory Highway). The north end of this segment abuts the new US 40 in T5N/R82W, Section 26, but the portion of the segment within the project ROW has been heavily disturbed and modified by various highway maintenance activities and thus will not suffer further impacts during construction. Site 5MF447 is a prehistoric open camp, the east side of which extends into the project ROW, that has potential for subsurface remains. The site was recently reevaluated by Centennial and monitoring during fencing operations is recommended (Sherman et al. 1999).

Table 2: Previous Archaeological Surveys in the Present Project Area

Location Number	State/US Highway	OAHP Report Accession Number	CDOT Project Number	Project & Year (Class III unless otherwise noted)	Comments as Related to Incursion into Present Project Area
1	6	EA.LM.R69	-	Powerline/Access Road, 1998	Project terminus is south of Highway 6, negligible incursion.
2	13	MC.CM.R1	-	Coal Mining Survey, 1991	Addresses coal mining-related areas only.
2	13	-	C SW00-102	Fiber Optic Line, 1999	Location 4 surveyed in entirety.
3	13	-	-	-	No previous projects.
4	US 40	GA.LM.R78	-	Telecommunications Line, 1995	Parallels Highway 40 for 2 miles but position related to ROW is not specified and is probably outside the ROW.
4	US 40	GA.E.R18 JA.FS.R45 MC.CH.R8	FR 040-2(24)	CDOT road improvement	Encompasses .2 miles at north end of Location 8.
5	125	JA.FW.A	-	Wildlife Refuge block survey, 1979	Penetrates Highway 125 for a distance of .25 miles.
6	131	EA.LM.R40	-	Transmission Line, 1994	Bisects Highway 131 at 2 points for a negligible distance.
7	131	EA.CH.NR11	-	BLM block survey, 1992	Only unidentified spot locations were selected for survey.
8	131	-	-	-	No previous projects.
9	131	-	-	-	No previous projects.
10	133	-	-	-	No previous projects.
11	133	-	-	-	No previous projects.
12	133	-	-	-	No previous projects.

Table 3: Previously Recorded Sites that Fall within 500 feet of the Present Project Area

Location Number	State/US Highway	Site Number	Location/ 7.5' Quadrangle	Site Type ¹ / Year Recorded	NRHP Status ² and Comments
1	6	5EA204	T4S/R84W, Sec 33, Eagle 1962/1987	H; House 1977	FE; Located 50 ft south of the highway and outside the ROW.
2	13	5MF331	T5N/R91W, Sec 7, Round Bottom 1966	Unknown	Eligibility unknown; Located 400 ft west of Highway 13 and outside the ROW
2	13	5MF445	T6N/R91W, Sec 29, Round Bottom 1966	P; Open camp 1975	Eligibility unknown; Not in Highway 13 ROW.
2	13	5MF446	T6N/R91W, Sec 29, Round Bottom 1966	P; Open camp 1975	Eligibility unknown; Not in Highway 13 ROW.
2	13	5MF447	T6N/R91W, Sec 20, Castor Gulch 1966	P; Open camp 1975	Eligibility unknown; Monitoring is recommended during construction.
2	13	5MF448	T6N/R91W, Sec 21 Castor Gulch 1966	P; Open camp 1975	Eligibility unknown; Site is probably destroyed and requires no further work.
2	13	5MF449	T6N/R91W, Sec 21, Castor Gulch 1966	P; Open camp 1975	Eligibility unknown; Site is probably destroyed and requires no further work.
2	13	5MF1412	T5N/R91W, Sec 17, Round Bottom 1966	H; Wise Hill Road Segment	Site is unevaluated; Most of the segment runs 300 ft east of Highway 13 outside the west side ROW.
2	13	5MF1412.1	T5N/R91W, Sec 17, Round Bottom 1966	H: Wise Hill Road Segment	FNE; Site is east of Highway 13 and outside the west side ROW.

Table 3: Previously Recorded Sites that Fall within 500 feet of the Present Project Area

Location Number	State/US Highway	Site Number	Location/ 7.5' Quadrangle	Site Type ¹ / Year Recorded	NRHP Status ² and Comments
2	13	5MF3326	T5N/R91W, Sec 6, Round Bottom 1966	H; Wise Hill #3/ Hart Mine	NE; The site was formerly reported to bisect Highway 13 at MP 81. A subsequent reevaluation by Centennial (Sherman et al 1999) establishes the site outside the ROW.
2	13	5MF4514	T5N/R91W, Sec 7, Round Bottom 1966	Unknown roadbed	FNE; Located east of Highway 13, outside the west side ROW.
2	13	5MF4515	T5N/R91W, Sec 6, Round Bottom 1966	Unknown road bed	FNE; Located east of Highway 13, outside the west side ROW.
3	13	-	-	-	No previously recorded sites.
4	US 40	5GA686.14	T5N/R82W, Sec 26 & 35, Lake Agnes 1956	H; Old US Hwy 40 (Victory Hwy)	Contributes to an OE District; Grade abuts south side of new highway in Section 26 but is heavily disturbed in ROW.
4	US 40	5GA1275/ 5JA687	T5N/R82W, Sec 22 & 23, Rabbit Ears Peak 1956	P; Chipped Stone Scatter	ONE; Located directly within the highway ROW, it appears to have been completely destroyed.
4	US 40	5GA2214	T5N/R82W, Sec 26 & 34, Lake Agnes 1956	P; Lithic Scatter	OND; Located 400 ft west of highway and outside the ROW.
5	125	-	-	-	No previously recorded sites.
6	131	5EA272	T4S/R83W, Sec 3, Wolcott 1962/1987	P; Camp site & rock alignment	OND; Located west of highway and outside the ROW.
6	131	5EA1089	T3S/R83W, Sec 34, Wolcott 1962/1987	P; Lithic Scatter	ONE; Located west of highway and outside the ROW.
7	131	-	-	-	No previously recorded sites.
8	131	-	-	-	No previously recorded sites.
9	131	-	-	-	No previously recorded sites.

Table 3: Previously Recorded Sites that Fall within 500 feet of the Present Project Area

Location Number	State/US Highway	Site Number	Location/ 7.5' Quadrangle	Site Type ¹ / Year Recorded	NRHP Status ² and Comments
10	133	-	-	-	No previously recorded sites.
11	133	5GF520.1	T8S/R88W, Sec 11, Carbondale 1961/1987 & Mount Sopris 1961/1987	H; Crystal River & San Juan Railroad Grade	No eligibility status; Site is 150 ft east and outside of the ROW.
12	133	5GF1547/ 5PT39	T8S/R88W, Sec 10 & 15, Mount Sopris 1961/1987	H; Aspen & Western Railroad Grade	FNE in 1976 in Pitkin County; Highway 133 follows the railroad route, the grade is buried.

¹ H=Historic; P=Prehistoric

² FE=Field Eligible; FNE=Field Not Eligible; OE=Officially Eligible; OND=Officially Needs Data; ONE=Officially Not Eligible

RESEARCH ORIENTATION

The main objectives of the inventory were to locate and record all cultural resources in the project area and to formulate appropriate management recommendations. The data accumulated by this project are intended for integration into the broader data base for the Colorado Rocky Mountains and northwest areas. Through this integrative process, the results of aerially limited studies such as the present undertaking can contribute to specific research topics formulated in response to current cultural overviews.

The prehistoric and historic contexts for this area of Colorado list research topics and deficiencies in the existing data bases to which investigations of any scope can contribute. Prehistoric themes pertinent to this investigation can realistically be expected to be limited to general themes such as chronology, site location and resource utilization (Reed and Metcalf 1999). Pertinent historic themes are somewhat more specific: coal mining, early transportation, railroads, farming and ranching, and the impact of automobiles (Mehls 1984).

ANTICIPATED RESULTS

Expectations for this investigation were based on the limited number of previous investigations in the general area and the Colorado OAHp contexts as described above. The limited number of cultural resources documented in the area and the disturbed nature of the highway ROW suggest that very few resources would be identified. Prehistoric resources are apt to be representative of the more recent temporal stages, excepting the Protohistoric, and are most likely

to consist of lithic scatters, possibly with associated features such as hearths. Historical resources are likely to be associated with coal mining and ranching/farming activities.

FIELD METHODS

A prehistoric site is defined as any locality containing structures or features, or five or more artifacts occurring in a restricted area and having apparent association with one another. A locality with fewer than five artifacts may be defined as a site if there is evidence of buried materials or if the locality has been disturbed and there is evidence that other artifacts have been removed. Otherwise, localities having four or fewer artifacts and no structures or features are defined as prehistoric isolated finds (IFs). Historical sites are defined as loci of patterned historical activity; these would include structures and structural remnants, trash concentrations or scatters suggesting repeated use of the area, mines or associated facilities, and any refuse dump. Historical IFs are individual historical artifacts and small clusters of artifacts that are not obviously established refuse dumps. The minimum age requirement mandating the recording of historical sites and IFs is 50 years unless the site has special significance such as association with historic events and/or individuals.

The field survey was accomplished with two archaeologists walking single one-way transects of the ROW corridor in leap-frog fashion from the beginning of each location to the end. Whenever possible a position was taken midway between the pavement edge and ROW fence, and the ground was scanned back and forth. At some locations the ROW was unusually wide, which required implementation of a zig-zag pattern in order to adequately cover the broader area. Slopes greater than 30° were not surveyed because they were assessed as unlikely locations for cultural resources, and in most cases consist of fill deposited during highway construction. Road cuts and other soil exposures were given special attention and scrutinized carefully for cultural remains. Although the ground was completely free of snow in all areas, visibility was highly variable from location to location and even within a single location, and is therefore reported in further detail below.

INVENTORY RESULTS AND EVALUATIONS

Location 1 (2.5 miles, south side): Virtually the entire length of Location 1 is at least moderately disturbed and some areas are heavily disturbed, probably due to a variety of repeated road maintenance activities. Ground cover consists mainly of grasses with some sagebrush and other unidentified shrubs. Ground visibility averaged 40-50% in the first mile but dropped to less than 5% thereafter. Previously recorded site 5EA204 is known to exist nearby but was not encountered in the survey ROW. No cultural resources were identified.

Location 2 (10.4 miles, west side): Location 2 had already been surveyed just one year earlier by Centennial in association with a separate project (Sherman *et al.* 1999). It was decided that a repeat survey and reevaluation of previous sites after such a short period of time was unnecessary and that

a brief review of the earlier project results would suffice. Three sites exist within the present project ROW:

Site 5MF447 was first recorded in 1975 and is identified as a prehistoric open camp with potential for subsurface remains. NRHP eligibility is unknown. The east side of the site extends into the present project ROW. Centennial determined during the site revisit in 1999 that subsurface potential still exists and recommends that the site be monitored during fencing operations.

Sites 5MF448 and 5MF449 were first recorded in 1975 and are identified as prehistoric open camps. Their NRHP eligibility is unknown. No evidence of the sites was found during the 1999 survey thus leading to the conclusion that both have probably been destroyed.

Location 3 (4.1 miles, east side): Ground visibility at this location is generally limited by a dense cover of grasses interspersed with sagebrush and stands of thick willows. Vegetation is especially dense in the northern half, covering virtually 100% of the ground, but is less thick in the southern half where visibility averaged 20%. No cultural resources were encountered.

Location 4 (2.7 miles, south side): Visibility for the first 1.1 miles of this segment (that starts at the junction of US 40/SH 14 and proceeds east) is nearly 0% due to matted grasses and low sagebrush. The ground is moderately disturbed near the roadway and only lightly disturbed near the ROW fence line. The following 0.5 mile consists of a steep embankment that exhibits heavy disturbance and for these reasons was not surveyed. Visibility of the last 1.1 miles averaged 15% through matted grasses and sagebrush. No new cultural resources were found. Two existing sites were reevaluated:

Previously recorded site 5GA1275/5JA687 is reported to occur in Location 4 ROW near the junction of US 40 and SH 14 (Muddy Pass). The site was initially recorded in 1988 by the CDOT Archaeological Unit and identified as a prehistoric chipped stone scatter (Angulski *et al.* 1988; Hand 1989). The OAHp officially declared the site not eligible to the NRHP on March 16, 1989. The site location was first revisited in 1997 by Foothills Engineering Consultants, Inc. as part of a transmission line survey, and they reported finding no evidence of the site (Mead and Moore 1997). The current (second) revisit has also failed to identify any site remains. The site is reevaluated as a shallow surface manifestation that has probably been completely destroyed by highway maintenance activities.

Previously recorded site 5GA686.14 is a contributing segment of the NRHP-eligible old US 40 (Victory Highway). It was originally recorded and assessed as contributing in 1997 (Taylor and Hoefer 1997). The north end of the segment abuts the new US 40 in T5N/R82W, Section 26 but the last 50 ft within the ROW has suffered heavy disturbance and modification due to various road maintenance activities and thus will not be adversely affected at this point by the present undertaking.

Location 5 (2.1 miles, west side): Thick matted grasses, dogwoods, and willows limit ground visibility at this location to less than 5% and in many places it is 0%. Much of the ROW has been disturbed by the construction of a borrow ditch. The Larand School is known to occur nearby but outside the highway ROW, and possible associated artifacts were not encountered in the ROW. It

was noted in passing that the area where the school may have been standing appears to have been bulldozed.

Location 6 (1.2 miles, east side): Visibility at this location averaged 40-50%. Vegetation consists of grasses, low sagebrush, greasewood, and rabbitbrush. One prehistoric isolated find (5EA1689), consisting of a flake tool/sidescraper fashioned from white chert, was recorded. No other cultural resources were encountered.

Location 7 (0.5 mile, west side): At the time of survey this location was wet and marshy with a small creek running the length of the segment that may have been diverted from its natural course. Heavy vegetation consisting of thick, matted grasses, willow, and other unidentified shrubs limited ground visibility to virtually 0%. No cultural resources were identified.

Location 8 (2.2 miles, west side): Most of the low areas in this segment were wet and marshy at the time of survey. Dominant vegetation includes grasses and sagebrush. Visibility varied from 0% in the low areas to 40% on hills. The segment exhibits moderate to heavy disturbance throughout that is most likely attributed to highway maintenance activities.

A segment of railroad track that is currently in use and maintained was recorded in T3N/R85W, Section 9 (5RT1396.1). The tracks are labeled on current 7.5' quadrangle maps as the Denver and Rio Grande Western Railroad (D&RGW). The D&RGW played a major role in the settlement and commercial development of Colorado and the American West. For this reason the overall line is evaluated as eligible to the NRHP. This functioning segment of the historic line has undergone periodic repair and replacement and thus has lost integrity of materials and workmanship. However, the original railroad route has been preserved, and integrity of design, setting, and feeling is strong. Centennial assesses this segment of the railroad as contributing to the NRHP-eligible site.

Location 9 (1.4 miles, east side): Ground conditions at this location were similar to that at Location 8. Visibility in the wet and marshy low areas was 0% and jumped to 40% on hill tops. Vegetation includes grasses and sagebrush. Disturbance throughout the segment is moderate to heavy.

A 115 ft-long segment of the Oak Creek Ditch (5RT1397.1) was recorded in T3N/R85W, Section 5. At the time of the visit the ditch was flowing and appeared to be adequately maintained. The recorded segment passes under SH 131 by way of a steel culvert. It is unlined and width/depth is unknown

The Oak Creek Ditch bears Identification Number 805 in the records of the Colorado Division of Water Resources, Division 6, Water District 58, from which the following data are taken (website: <http://cdss.state.co.us>). Starting in 1951, the records document 64 years of water diversion activity for this ditch with an average flow of 3.35 cfs. The ditch heads out of the south bank of Oak Creek in T3N/R85W, Section 6. Water for the ditch was first appropriated on July 25, 1887. A decree granting water rights to 6.0 cfs was not adjudicated until September 22, 1892. On May 25, 1932, 0.5 cfs was transferred to the Oak Creek Pipeline. The ditch was enlarged and an additional 3.0 cfs

was appropriated on September 30, 1939 but was not adjudicated until March 9, 1953. A second enlargement called for the appropriation of an additional 2.5 cfs on May 28, 1949 that was not adjudicated until March 30, 1964. The 1969 USGS 7.5' Oak Creek quadrangle shows that the Oak Creek Ditch is a relatively small water control structure that irrigates a limited area south of the town of Oak Creek. In 1993 the ditch was reported to be irrigating 138 acres of grass pasture. Typical of many such ditches constructed in Routt County during the late 19th-early 20th centuries, it exhibits unremarkable design and has little historical value. Centennial assesses the Oak Creek Ditch as not eligible to the NRHP.

Location 10 (3.3 miles, south side): The east end of this location is at the top of McClure Pass and the segment proceeds west downhill over varied terrain that sometimes slopes steeply away from the highway. Much of the ground surface is road berm that was built by hauling in fill dirt when the highway was first paved. The width of the ROW is greater at this location than any other, averaging 100 ft and sometimes widening further. Ground visibility is highly variable. The eastern one-third of the route is mostly forested and covered with dense undergrowth and heavy leaf litter. The old ROW fence is down and thus difficult to see because it is obscured by vegetation. As one approaches the west half of the survey segment the trees disappear and the open ground is rocky and covered in grasses. Ground visibility here averages 20-40%. Approximately 25% of the ground at Location 10 has slopes greater than 30° and thus was not surveyed. No cultural resources were encountered.

Locations 11 and 12 (3.7 miles each): These two locations exactly parallel each other on the east and west sides of SH 133 and are therefore discussed as one. The Crystal River parallels the east side of the study area outside of the ROW except at one point where it crosses under the highway to the west side in T8S/R88W, Section 10. Vegetation is dominated by grasses throughout the segment, and a stand of deciduous trees descends to the road edge on the west side in the vicinity of MP 63. Cottonwoods and willows occur sporadically along ditches and in the vicinity of culverts that pass under the road. Limited OAHF records indicate that in this area SH 133 was constructed over, and follows the route of, a railroad grade associated with the Aspen and Western Railroad (5GF1547). No evidence of the railroad was identified in the field during the present survey.

Locations 11 and 12 run through an area of hay fields and pasture land that is irrigated by numerous ditches and canals. Four separate ditches were recorded that cut across or parallel the study area within the ROW:

The Bowles and Holland Ditch (5GF2798.1) crosses SH 133 at MP 65.8 in T8S/R88W, Section 10, approximately 150 ft north of the Crystal River crossing. The recorded segment is 100 ft long and 8 ft wide, and passes under the highway by way of a steel culvert that is 5 ft in diameter. At the time of the visit the ditch was flowing and appeared to be adequately maintained, although vegetation obscured much of the culvert opening on the west (outflow) side. The ditch segment is unlined and its depth is unknown.

The Bowles and Holland Ditch bears Identification Number 547 in the records of the Colorado Division of Water Resources, Division 5, Water District 38, from which the following data

are taken. The ditch heads out of the north bank of the Crystal River and can be seen from the recorded segment approximately 300 ft east of the highway in the same township/range/section as reported above. Starting in 1951 the records document 31 years of water diversion activity for this ditch that carries an average flow of 14.8 cfs. Although the estimated capacity of the ditch is 25.0 cfs, the decreed capacity is 20.0 cfs. Water in the amount of 2.8 cfs was first appropriated April 9, 1884 but was not adjudicated until May 11, 1889. The ditch was enlarged and an additional 3.2 cfs was appropriated on June 15, 1887 with an adjudication date of February 21, 1920. A second enlargement with an appropriation of 14.0 cfs occurred on June 15, 1890 and was adjudicated August 25, 1936. In 1993 the ditch was reported to be irrigating 376.2 acres of alfalfa hay and grass pasture south of Carbondale. Typical of many such ditches constructed in Garfield County during the late 19th-early 20th centuries, it exhibits unremarkable design and has little historical value. Centennial assesses the Bowles and Holland Ditch as not eligible to the NRHP.

The Carbondale Ditch (5GF2799.1) crosses SH 133 at MP 65.6 in T8S/R88W, Section 10, some 700 ft south of the Crystal River crossing. The ditch was flowing at the time of the visit and appears to be adequately maintained, although the outflow on the west side is heavily obscured by brush. The recorded segment is 120 ft long and 8 ft wide, and passes under the highway by way of a 5-ft-diameter steel culvert. The ditch segment is unlined and of unknown depth.

The Carbondale Ditch bears Identification Number 574 in the records of the Colorado Division of Water Resources, Division 5, Water District 38 from which the following data are taken. The ditch headgate is on the south bank of the Crystal River approximately 1500 ft southeast of the recorded segment in the same township/range/section reported above. Water in the amount of 5.0 cfs was first appropriated on April 1, 1887 but was not adjudicated until May 11, 1889. The ditch was enlarged and an additional 36.24 cfs was appropriated on April 1, 1920, but not adjudicated until August 25, 1936. Starting in 1951, the records document 35 years of water diversion activity for this ditch that carries an average flow of 24.64 cfs. The ditch has an estimated capacity of 40.0 cfs and the decreed capacity is 41.24. In 1993 the ditch was reported to have been irrigating 91.1 acres of grass pasture south of Carbondale. Typical of many such ditches constructed in Garfield County during the late 19th-early 20th centuries, it exhibits unremarkable design and has little historical value. Centennial assesses the Carbondale Ditch as not eligible to the NRHP.

The Lowline Ditch (5PT890.1) crosses SH 133 three times in Pitkin County in T8S/R88W, Section 27 at MP 62.4 south of Thompson Creek and MP 62.8 and MP 62.9 north of Thompson Creek. The ditch then veers west out of the ROW before entering it again in the vicinity of MP 63.7 in T8S/R88W, Section 22 where it parallels the west side of the highway for approximately 1500 ft before veering west again.

The Lowline Ditch bears Identification Number 840 in the records of the Colorado Division of Water Resources, Division 5, District 38, from which the following data are taken. The ditch headgate is on the west bank of the Crystal River in T8S/R88W, Section 27, approximately 1800 ft southeast of the SH 133 MP 62.4 crossing. The ditch crosses Thompson Creek by way of a flume and does not draw water from this source. The first water was an appropriation of 19.0 cfs on

September 25, 1890 that was not adjudicated until December 12, 1902. The ditch was enlarged and an additional 21.5 cfs was appropriated on October 10, 1923 and adjudicated August 25, 1936. Starting in 1951, the records document 38 years of water diversion activity for this ditch that carries an average flow of 30.88 cfs. The estimated capacity is 40.0 cfs and the decreed capacity is 40.5 cfs. In 1993 the ditch was reported to be irrigating 627.5 acres of alfalfa hay and 129.8 acres of grass pasture south of Carbondale. Typical of many such ditches constructed in Pitkin County during the late 19th-early 20th centuries, it exhibits unremarkable design and has little historical value. Centennial assesses the Lowline Ditch as not eligible to the NRHP.

The Helms Ditch (5PT889.1) crosses SH 133 in T8S/R88W, Section 22 (Pitkin County). The ditch is very small (ca 1 ft wide) and does not appear on the USGS 7.5' Mount Sopris quadrangle. It was identified as the Helms Ditch through a subsequent telephone conversation with Larry Gepfert of the Division 5 Water Resource Area (Glenwood Springs).

The Helms Ditch bears Identification Number 747 in the records of the Colorado Division of Water Resources, Division 5, District 38, from which the following data are taken. The ditch headgate is on the west bank of the Crystal River in T8S/R88W, Section 22. Starting in 1951 the records document 34 years of water diversion activity for this ditch that carries an average flow of 5.86 cfs. The decreed capacity is 6.0 cfs. Water for the ditch in the amount of 2.93 cfs was first appropriated on November 17, 1899 and adjudicated on February 2, 1903. An additional appropriation of 3.07 cfs was taken on May 1, 1924 and not adjudicated until August 25, 1936. In 1993 the ditch was reported to be irrigating 218.5 acres of alfalfa and 42.4 acres of grass pasture. This is a very small irrigation ditch that serves a limited area south of Carbondale and is typical of many such ditches constructed in Pitkin County during the late 19th-early 20th centuries. It exhibits unremarkable design and has little historical value. Centennial assesses the Helms Ditch as not eligible to the NRHP.

PROJECT SUMMARY AND MANAGEMENT RECOMMENDATIONS

An intensive (Class III) cultural resource inventory was conducted by Centennial at twelve CDOT right-of-way locations in Eagle, Grand, Gunnison, Jackson, Moffat, Pitkin, and Routt Counties, Colorado. Weather conditions during the time of field survey were good, there was no snow cover, and ground visibility was adequate. The survey resulted in the recording of one prehistoric isolated find and six historic sites. In addition, four prehistoric sites and one historic site were visited and reevaluated. Management recommendations are presented in Table 4.

Table 4: Management Recommendations for Newly Recorded and Reevaluated Sites in the Present Project ROW by Location and Highway

Location Number	State/US Highway	Site Number	Site Type	NRHP Status	Management Recommendations
1	6	-	-	-	-
2	13	5MF447	Prehistoric Open Camp	Unknown	Monitoring recommended during fence construction.
2	13	5MF448	Prehistoric Open Camp, Destroyed	Unknown	No further work.
2	13	5MF449	Prehistoric Open Camp, Destroyed	Unknown	No further work.
3	13	-	-	-	-
4	US 40	5GA686.14	Historic Old US Hwy 40 (Victory Hwy)	Eligible as a contributing segment to a larger site	No adverse affect.
4	US 40	5GA1275/5JA687	Prehistoric Chipped Stone Scatter, Destroyed	Officially Not Eligible	No further work.
5	125	-	-	-	-
6	131	5EA1689	Isolated Find	Not Eligible	No further work.
7	131	-	-	-	-
8	131	5RT1396.1	D&RGW Railroad segment	Eligible as a contributing segment to a larger site.	No adverse affect.
9	131	5RT1397.1	Oak Creek Ditch segment	Not Eligible	No further work.
10	133	-	-	-	-
11 & 12	133	5GF2798.1	Bowles & Holland Ditch segment	Not Eligible	No further work.
11 & 12	133	5GF2799.1	Carbondale Ditch segment	Not Eligible	No further work.

**Table 4: Management Recommendations for Newly Recorded and Reevaluated Sites
in the Present Project ROW by Location and Highway**

Location Number	State/US Highway	Site Number	Site Type	NRHP Status	Management Recommendations
11 & 12	133	5PT890.1	Lowline Ditch segment	Not Eligible	No further work.
11 & 12	133	5PT889.1	Helms Ditch segment	Not Eligible	No further work.

It is recommended that cultural resource clearance be granted for this project so that the construction phase of the CDOT Region-wide Fencing Project No. C R300-071 can proceed, with the stipulation that monitoring be conducted at site 5MF447. It is possible that small, isolated sites or artifacts escaped notice in areas where matted grasses and other thick vegetation restricted ground visibility. The presence of these surface artifacts can sometimes suggest potential for subsurface cultural materials. If subsurface cultural remains are encountered at any of the twelve locations during the construction phase of the region-wide fencing project, all activity should cease in the area of discovery and a CDOT archaeologist notified so the site can be properly evaluated for NRHP significance.

REFERENCES CITED

- Angulski, D, OD Hand, and K. Gilmore
1988 Colorado Cultural Resource Survey, Management Data Form for site 5GA1275/5JA687. Colorado Historical Society Office of Archaeology and Historic Preservation, Denver.
- Arbogast, William R.
1992 *An Archaeological Inventory of Fourteen Miles of U.S. Highway 40 in the Vicinity of Milner, Routt County, Colorado*. Centennial Archaeology, Inc., Fort Collins, Colorado.
- Benedict, Audrey DeLella
1991 *A Sierra Club Naturalist's Guide: The Southern Rockies*. Sierra Club Books, San Francisco, California.
- Bridge Management System Unit
1999 *Field Log of Structures: Colorado Department of Transportation, Design/Construction*. Colorado Department of Transportation, Denver.
- Fitzgerald, James P., Carron A. Meaney, and David M. Armstrong
1994 *Mammals of Colorado*. Denver Museum of Natural History and University Press of Colorado, Niwot, Colorado.
- Hand, OD
1989 Archaeological Survey of Muddy Pass at the Junction of SH 14 and SH[sic] 40, Grand and Jackson Counties, Colorado. Colorado Department of Transportation, Archaeological Unit, Denver.
- Kalasz, Stephen M., Christian J. Zier, Bridget M. Ambler, Michael McFaul, and Margaret A. Van Ness
1990 *Excavation of Archaeological Sites 5MF2539 and 5MF2544 for the Craig-Bonanza Project, Moffat County, Colorado*. Centennial Archaeology, Inc., Fort Collins, Colorado.
- La Point, Halcyon
1987 An Overview of Prehistoric Cultural Resources: Little Snake Resource Area. *Cultural Resource Series*, No. 20, Colorado Bureau of Land Management, Denver.
- Mead, Earl, and Gary Moore
1997 Colorado Cultural Resource Survey, Site or Property Reevaluation Form for site 5GA1275/5GA687. Colorado Historical Society Office of Archaeology and Historic Preservation, Denver.

Mehls, Steven F.

- 1984 *Colorado Mountains Historic Context*. Office of Archaeology and Historic Preservation, Colorado Historical Society, Denver.

Madole, Richard F., William C. Bradley, Deborah S. Loewenherz, Dale F. Ritter, Nathaniel W. Rutter and Colin E. Thorn

- 1987 Rocky Mountains. In, *Geomorphic Systems of North America*, Centennial Special Volume 2, Chapter 7, edited by William L. Graf, The Geological Society of America, Inc., Boulder, Colorado.

Mutel, Cornelia Fleischer, and John C. Emerick

- 1992 *From Grassland to Glacier: The Natural History of Colorado and the Surrounding Region*. Johnson Books, Boulder, Colorado.

Reed, Alan D., and Michael D. Metcalf

- 1999 *Colorado Prehistory: A Context for the Northern Colorado River Basin*. Office of Archaeology and Historic Preservation, Colorado Historical Society, Denver.

Sherman, Stephen A., Tania R. Metcalf, Mary W. Painter, D. Chadwick Jones, and Christian J. Zier
2000 A Cultural Resource Survey of Interstates 25, 70, 225, and 270, U.S. Highways 34 and 160, and State Highways 13 and 470, for the Proposed Adesta Communications Fiber Optic System, Colorado. Centennial Archaeology, Inc., Fort Collins, Colorado.

Taylor, Melissa, and Ted Hoefler

- 1997 Colorado Cultural Resource Survey Management Data Form and Historical Archaeology Component Form for site 5GA686.14. Colorado Historical Society Office of Archaeology and Historic Preservation, Denver.

The Tread of Pioneers Museum

- 1979 *The Historical Guide to Routt County*. The Tread of Pioneers Museum, Steamboat Springs, Colorado.

